

AMERICAN VETERINARY REVIEW.

FEBRUARY, 1897.

EDITORIAL.

MORE THAN ONE!

In the January REVIEW we called the attention of the veterinary profession of the United States to some parts of the inaugural address delivered by Prof. Law, Director of the New York State Veterinary College, especially where he refers to the work done by the private schools of veterinary medicine, which we thought the worthy Director had treated in rather an unjust manner, accusing them of motives in their undertakings which we believe could not be applied in the general way he had presented them. We thought at that time our recriminations were sufficient, and that probably we had done our duty in showing in what a wrong light Prof. Law had presented the efforts of the private schools in establishing and elevating the veterinary profession in the States. In reading over again the Director's address, however, we observe another point for which, it seems to us, he should be called upon to answer.

After giving the reasons which, in his estimation, rendered the private schools detrimental, and which handicapped their usefulness and their success, Director Law says, in speaking of one of these reasons ("the sale of diplomas"): "*To this last, lowest depth of sordidness* MORE THAN ONE *veterinary college in America has sunk.*"

What! more than one? That one should be accused is bad enough; but he says there are more than one!

We ask of Director Law this plain question: *If one, which do you accuse? If more than one, how many? Name them.*

The accusation is degrading to all the private schools, and we cannot see how an answer to this question can be refused. Let the culprits be known. If they are not named, by what denomination shall the statement of Prof. Law be called?

The profession will answer if Director Law declines.

VETERINARIANS OF NEW YORK, KILL THIS BILL.

Last fall the REVIEW sounded an alarm that our law in New York State would be attacked during the present session of the legislature, and we advised all members to be on the alert, ready to strangle any attempt to break the integrity of our hard-earned statutes. Already the enemy is at work, and in the most despotic manner, for, as will be seen by the subjoined bill, he asks that the whole superstructure of our laws be torn down, and the "quack" permitted to register without any other qualification than a five-year practice. The audacity of the member who has introduced this abominable measure (Mr. Ives) is absolutely incomprehensible; it seems incredible that a public man would have the effrontery to thus insult the members of the veterinary profession of this State, after all that has been done by them in their struggles to elevate their calling. After the sacrifices which they have made and the hardships which they have imposed upon their members in placing themselves under the Regents' laws; and then to ask the legislature to annul the very foundation of their existence, is a piece of brigandage which should mark the member for life.

But the duty of every veterinarian in the State is so plain that we feel that we only need to declare the situation in order to throw them into the most active opposition to the infamous proposition.

We print below a letter sent out by the Secretary of the State Board of Veterinary Examiners, the alert and loyal Dr. Wm. Henry Kelly, of Albany, who very fully states the facts in the case, and advises concerted action by veterinarians. In order

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to make the attack gigantic, decisive, and final we would advise every reader of the REVIEW to act upon the advice given by Secretary Kelly, and let the communications be so earnest and emphatic that those who have the guidance of the bill will know what a reptile they are warming at their hearths; and if it be properly placed before them we feel confident that the bill will never come from the committee to which it has been referred.

The letter of Secretary Kelly and the bill itself are as follows:

STATE BOARD OF VETERINARY MEDICAL EXAMINERS,
 SECRETARY'S OFFICE, No. 195 WESTERN AVE.,
 ALBANY, N. Y., Jan. 19th, 1897.

DEAR DOCTOR:—Inclosed you will find a copy of a bill, which is in behalf of the "quack," and an attempt to amend our law. We must defeat it. This can be done, if each member of our society will write his Senator and Assemblyman a personal letter, stating his objections, and requesting them to call on Assemblyman Horton, Chairman of the Committee on General Laws; also write a letter to Assemblyman Horton, objecting to its passage, and asking for a hearing.

Very respectfully,

WM. HENRY KELLY, Sec'y.

The Bill is as follows:

STATE OF NEW YORK—No. 137—IN ASSEMBLY.

Introduced by Mr. Ives—read once and referred to the committee on general laws.

AN ACT

TO AMEND CHAPTER THREE HUNDRED AND THIRTEEN OF THE LAWS OF EIGHTEEN HUNDRED AND EIGHTY-SIX, ENTITLED "AN ACT TO REGULATE THE PRACTICE OF VETERINARY MEDICINE AND SURGERY IN THE STATE OF NEW YORK."

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section three of chapter three hundred and thirteen of the laws of eighteen hundred and eighty-six, entitled "An act to regulate the practice of veterinary medicine and surgery in the State of New York," is hereby amended so as to read as follows:

§ 3. Any person who has been practicing veterinary medicine and surgery, or any branch thereof, as a profession in this State, for a period of not less than five years preceding the passage of this act, without having obtained a diploma or certificate from a legally chartered or incorporated veterinary college, university or society, as provided for in section two of this act, must register on or before January first eighteen hundred and ninety-eight, upon making and filing with the clerk of the county in which he resides, an affidavit stating that he has been so practicing veterinary medicine and surgery for the period hereinbefore prescribed.

§ 2. This act shall take effect immediately.

A VERY IMPORTANT LEGAL DECISION.—A decision of great interest to the veterinary medical profession was given by Mr.

Justice Davy at a trial term of the Supreme Court held at Bath, Steuben County, on the 5th day of January, 1897. It was in the case of the County of Steuben against Wood. The prosecuting committee of the New York State Veterinary Society caused action to be brought against John Wood pursuant to Chapter 860 of the laws of 1895, for the illegal practicing of veterinary medicine.

The sole and only question involved at the trial was whether the dehorning of cattle was a surgical or non-surgical operation. It was contended on the part of the plaintiff that it was a surgical operation, and that the defendant was guilty of a violation of the statute and was liable to the penalty of fifty dollars for each day's practice. The defense claimed that it was a non-surgical operation, and that any unlicensed persons could perform the operation for hire without violating any statute. The State Veterinary Society employed Lewis Cass, Esq., of Albany, to prosecute the action. It was defended by the best legal talent in Steuben County. Upon the trial of the action, Prof. James Law, of the New York State Veterinary College, and Dr. Wm. Henry Kelly, of Albany, Secretary of the State Board of Veterinary Medical Examiners, were called as witnesses for the plaintiff. Both of these eminent gentlemen gave a very lucid and clear description as to what constituted a surgical operation, and although both were subjected to a very close and rigid cross-examination, the defense failed to shake or in any wise weaken the evidence given on direct examination. At the close of the trial the plaintiff's attorney requested the court to direct verdict for fifty dollars, being one full penalty, which was done. A stay of sixty days was given for the defendant within which to perfect the appeal to the Appellate Division. This is the first decision under the law of '95 upon this point. In fact, so far as we have been able to learn, it is the first decision of any court in the United States. This is a great victory for the profession. Mr. Cass feels confident he will be able to sustain the decision of Judge Davy before the Appellate Division.

ANOTHER STATE VETERINARY COLLEGE.—Not many years ago one of the veterinarians engaged in teaching in Chicago was, if we are well informed, actively endeavoring to have the institution with which he was connected become a branch of the University of Illinois. His efforts were serious, he was very enthusiastic, and he came very nearly succeeding. But, alas, for some reason or another, he left the college with which he had been affiliating and in behalf of which he had worked so earnestly; and it is thus that to-day the veterinary institutions of the great metropolis of the West are still private schools. But the West is jealous of the East; Chicago is jealous of New York; and as New York has had her State Veterinary College—for which the legislature has appropriated \$250,000 for its buildings and \$25,000 a year for its support—Illinois demands the same. *The Breeders' Gazette*, in an editorial, strongly advocates the establishment of such a school, with a similar appropriation. Every veterinarian and every one interested in live-stock will certainly approve of the demands and suggestions of the newspaper referred to. This country is large enough for more than one State veterinary college. One in New York, one in Chicago; that is a good beginning. A sarcastic said to us: "History repeats itself. Years ago there was but one private veterinary school, then came another, and another; to-day we have a dozen. Will it be the same for the State veterinary institutions?" We answered: "Perhaps"; and we are inclined to think that the sooner this occurs the better, if we are ever going to have "*the great National Veterinary College*" dreamt of by some of our friends years ago.

VIVISECTION IN THE DISTRICT OF COLUMBIA.—Our readers will remember our remarks upon a bill presented some time ago in Congress on this subject, and also our observations as to the "nigger in the fence," concealed from view by the wording of the bill. It was defeated. But those who fathered it did not give up hope of a better result next time, and so new steps are being taken in anticipation of ultimate success. A new bill is

to be introduced in Congress, it having been favorably reported to the Senate in May last. Dr. C. W. Dabney, Jr., Assistant Secretary of Agriculture, has addressed a long letter to Hon. James McMillan, Chairman of the Committee on the District of Columbia, to which the bill has been referred. The exceptions taken by the Doctor are well to the point. They answer and expose the dangers of the passage of the bill and point out how the work of all scientists, of sanitarians, of the Bureau of Animal Industry, would be prevented, if such legislation were put in force. Upon other pages of this number of the REVIEW will be found the bill and the letter of Dr. Dabney in full.

THE THERMO-CAUTERY.—The days of old-fashioned cauterization are certainly gone from veterinary practice, and the old firing-iron and the forge are no longer used by veterinarians. The thermo-cautery has taken rank among the indispensable instruments of the veterinary arsenal. Paquelin's was first used in its original form, somewhat modified for veterinary purposes. Gradually many improvements and alterations have been introduced, and we have called attention to them as they were presented. To-day we call the attention of our colleagues to that one manufactured by Mr. F. Drumm, of 43 Park Street, New York. It is a light and very handy instrument, with which we have obtained very good results.

TUBERCULIN AND MALLEIN TESTS.—These tests have now entered into almost daily practice in the life of a veterinarian, and our professional journals contain a number of advertisements offering practitioners more or less advantages for the purchase, not only of the tuberculin and mallein, but also the instruments necessary in applying the tests. The Oakland Chemical Company, the Pasteur Institute of New York, the Pasteur Vaccine Company of Chicago, are good places to obtain the necessary ingredients for applying these important diagnostic agents.

ORIGINAL ARTICLES.

"SOME EXPERIENCES IN THE SOUTH."

BY W. H. DALRYMPLE, M. R. C. V. S., BATON ROUGE, LA.

A Paper read before the United States Veterinary Medical Association, at Buffalo,
Sept. 2, 1896.

Mr. President and Gentlemen:—When first asked by our worthy Secretary to prepare a paper for this meeting I hesitated, principally on account of the lack of time, partly on account of the trouble, and to some extent because it was extremely doubtful whether I would be present to read it. However, after a second persuasive letter from Dr. Stewart, in which he mentioned the fact that several gentlemen were coming long distances from both North and West to contribute to the success of the meeting, and that he felt sure that something in the nature of a Southern experience would prove interesting to our Northern and Eastern brethren, I felt constrained to yield to his appealing request.

I trust, gentlemen, you will not feel disappointed when I tell you that I have not confined myself to the discussion of any one specific disease. It occurred to me that as professional work in the South, especially in my section of the country, might be new to the majority of you, a paper of a general or rambling character might prove the more interesting.

Until some seven years ago, when I was appointed to the Chair of Veterinary Science in the Louisiana State University and American Medical College, with my domicile in the city of Baton Rouge, the capital of the State, such a personage as a graduated "horse doctor" may have been read about, but by the majority of the inhabitants had never been seen, and for some time I was in the eyes of those good people, a living, walking curiosity, presumed, no doubt, to be endowed with the supernatural ability to cure all the ills that animal flesh is heir to. In time, however, the novelty died out, and it was found that the qualified veterinarian, in human form, had none of the mys-

terious about his "make-up," but that he was simply an exponent of a noble branch of medical science, with a knowledge—from his training—superior to that possessed by the empiric, to whose tender mercies (?) and lack of knowledge had previously been intrusted the medical (?) care of their live stock.

This experience has reference principally to the country districts in Louisiana, outside the city of New Orleans, in which city graduates have been located for some years.

Veterinary medicine and surgery in the more Southern States are still in their infancy ; but through the influence exerted by the reputable graduates the people are beginning to realize the value of intelligent aid in the care and treatment of their animals, in contradistinction to the illiteracy and superstition of the empiric, who is usually in the habit of compounding his mysterious nostrums at certain phases of the moon, and performing his so-called operations under similar lunar conditions.

The "quack" is still very largely in evidence, not only the native, but frequently we have men from further North, of the "flying specialist" type, who rarely make their appearance twice at the same place, but who usually make good use of their time and wits on their first visit, and succeed in taking the proverbial "barrels" of money out of the pockets of the credulous and confiding stock-owner. Unfortunately, we have as yet no State law to protect either the public or the profession against this class of imposition. In fact, I think the present existing conditions would hardly warrant legislation on this subject for some time yet. Outside of New Orleans there are few cities of any great size ; stock generally, although improving very much of late, is not of a very high class, and in many cases the owners prefer to let them take their chances rather than send any distance for the services of a qualified veterinarian. This condition of affairs, however, is gradually changing as the value of our services becomes better known ; but when I tell you that the State of Louisiana, outside of the city of New Orleans, can boast of only three or four qualified men you can readily see why it is that any sort of individual who makes the merest pre-

tence to a knowledge of the diseases of animals is pressed into service.

There is one section of the State, however, in which the livestock is of considerable value, and that is on the sugar plantations, some single plantations owning mules to the value of \$20,000 or more; and of course the maintenance of health among these animals, from an economic standpoint, is a matter of great importance. Mules have been cheaper of late, but not so long ago sugar mules averaged from \$175 to \$250 per head, which will give you some idea as to the class of animals. The sugar belt being easily accessible from New Orleans, a good deal of the practice is done by veterinarians resident in that city. I have had a good deal of experience myself with the sugar plantation stock and its management, or perhaps I ought to say mismanagement, and to give a little of that experience might be of interest to the meeting.

I might state here that it is estimated that something like \$100,000 is paid annually for sugar mules to replace those that die from disease and injury. This represents an enormous amount of loss, and it is evident there must be some substantial reason for it. Dietetic diseases are responsible for the largest percentage of the mortality, and gaseous or flatulent colic about heads the list. This is largely due to an almost entire want of knowledge of the anatomy of the digestive system and the physiology and chemistry of food and feeding. When first making investigations as to the predisposing and exciting causes of so many fatal cases of colic, enteritis, etc., I found an absolute lack of anything approaching a proper system of feeding. It was common on some plantations to feed the mules—during hard work—only once per day, and that at night, the manger consisting of a long wooden trough, and the mules all loose; the consequence being that, having to undergo such a long interval of fasting, the animals were so voracious that before their hunger could become appeased they had “bolted” a considerable quantity of grain, not at all or imperfectly masticated, resulting in fermentation, from want of proper mixture with the

various digestive fluids, and the generation of gas ; then, on account of being loose, the more pugnacious animals got more than their share and deprived the more docile of a sufficiency, besides inflicting injuries by kicking.

It is customary even now among a great many to feed twice per diem (at noon and at night), the last feed being sufficient in quantity for two or perhaps more ordinary feeds, to which the animals stand up until they feel themselves satisfied, which is well into the hours at which they should be lying down, resting their worn-out muscular systems.

The principal excuse generally offered for such a system is that of custom ; and there is no doubt that the continuance of such absurd methods is largely due to the fact that the responsibility for the health and condition of the sugar-plantation animals is left almost entirely in the hands of illiterate and often superstitious individuals, as hostlers, who receive mere nominal wages, which is the height of false economy and is extremely inconsistent when we consider that for all the other departments, such as in the field and in the sugar-house, experts are engaged at good salaries.

Another cause of injury and many deaths among sugar mules is pressure over the loins from plough back-bands, producing paraplegia. The negro ploughman, if not closely watched, will shorten his back-band ; place it, in some cases, close up to the external angle of the ilia, and then hitch his traces up to it, causing the greater part of the work of lifting and traction of the plough to be imposed upon the lumbar region, where there is least support to the back. His object here is, when shallow ploughing is required, to make the mule do the work he ought to do in elevating the point of a plough that really ought to be at the blacksmith's shop to be put in proper running order. Another reason, attributed to this style of gearing, is that when a slow-gaited negro gets a fast-gaited mule he resorts to this method with the object of causing uneasiness to the animal and a consequent slowing of his speed.

On account of the want of information with regard to die-

tetics on the part of many of the owners, a great many of whom are city men, and the greater part of the responsibility of the care of the live-stock being placed in the hands of the illiterate hostler, we have frequent instances of disease and death from inferior quality of food as well as over-abundant quantity. I can recall one in which sixteen mules were affected in the kidneys in various stages of disease, from insipid diabetes to suppurative nephritis. Before my arrival on the plantation five of the animals had died, the last one of which offered the opportunity for an autopsy. Each kidney weighed about six pounds, and on section revealed in the cortical portion numerous purulent abscesses. After making a number of inquiries regarding the food, I found that for two months previous the animals had been fed peavine hay which was almost in a state of nitrification. I subjected a sample to the action of sugar solution, resulting in the production of butyric fermentation, which you all know is putrefactive fermentation.

It might be interesting to notice here that the danger of this hay, which is extensively fed with us, is that if improperly harvested and cured or subjected to moisture, as from a leaky barn-roof, fermentation may easily develop potassium nitrate. The plant is the cow pea (*dolichos sinensis*), and nitrogen predominates in the peas and the leaves, while potash is most abundant in the stems. In harvesting the hay, if the leaves are not saved the loss greatly depreciates its value as a food and increases the stems with a superabundance of potash and a deficiency of nitrogen, and this excessive amount of potash in the stem of the vines also suggests most careful pains in curing, so as to prevent the development of this salt, which when continuously fed for a length of time, producing excessive diuresis, resulting in more advanced kidney derangement. It is not to be wondered at that such conditions as I have just alluded to did and still exist when we take into account the length of time the stock-owning public, and more especially in the agricultural districts, were in the hands and at the tender mercy of empiricism, with few if any in those sections competent to lend intelligent aid.

Changes are now, I am glad to say, gradually coming about for the better. The spirit of inquiry is taking hold of our more progressive stock-owners. Information is anxiously sought after with regard to the nutritive value of the various food-stuffs, nutritive rations, properly balanced rations, etc. On many plantations the feeding—during hard-working seasons—of the best and heaviest oats that can be procured, in which the necessary nutritious principles exist in the best balanced condition, is supplanting the system of exclusive corn-feeding, with its excessive heat and fat producing properties in proportion to its albumenoid or muscle-forming elements. The purest obtainable water-supply is being procured either from deep wells or through pumps from the vast waters of the Mississippi River, instead of from shallow wells, generally situated at the lowest portion of the stable lot, and being contaminated by seepage from the surface. The systematic feeding and watering of stock is becoming to be looked upon as a necessity for the maintenance of health and the prevention of disease. And so, where ignorance and carelessness once largely predominated, intelligence in a great measure now prevails. Although no State in the Union, I suppose, could produce relatively such an abundance of luxuriant native and other grasses as Louisiana, it seems paradoxical to state that we have to depend largely on the West for our hay supply, some of which is of such an inferior quality that I am convinced it would not be bought for food in any other market in the country except the South. Of course, as education in the science of feeding progresses with us, other markets than the South will have to be found for inferior articles of stock food.

From such causes we frequently get diseases of a myotic nature. A few months ago I was called to investigate the cause of a disease among a levee contractor's mules that were at work repairing the levee or banks of a section of the Mississippi River. I found thirty-eight of the animals in hospitals suffering from parasitic stomatitis, with extensive ulceration and denudation of the mucous membrane of the under surface of the tongue and

of the buccal cavity. Sores had been produced in the angles of the lips by the bits, which no doubt favored access of the fungus. The food—both oats and hay—which was being used, and which was of a very inferior quality, was replaced by a superior grade, and in a short time, with the assistance of a little medication, the animals made a gradual and satisfactory recovery.

Among the contagious diseases with which we have to deal, glanders and anthrax are perhaps the two most important. We now have a State law for the control and eradication of contagious diseases, which was passed by the legislature during the session of 1895, but it lacks completeness.

Previous to the passage of the act we had a great many outbreaks of glanders, chiefly imported from other States by unscrupulous horse and mule dealers, who took advantage of our lack of legislation on the subject as well as of insufficient knowledge on the part of the prospective purchaser. Control and examination of outbreaks of the disease have usually resulted very successfully in the various parishes by the local authorities or police juries, as they are called, as soon as the disease was identified by some one competent to give an opinion, and all suggestions given with regard to the best sanitary measures to be adopted have always been strictly adhered to and carried out, with very satisfactory results. But, although the disease has been combated very successfully after its appearance in the State, we would require an organized inspection staff, with inspectors stationed at various points, to prevent the importation of diseased stock over the State line. Such an organization would, of course, require a considerable appropriation, and as yet our people are not sufficiently alive to the necessity for such an expenditure.

Osteo-porosis seems quite prevalent in the South. I have come across a number of cases, but personally I have not been able to do anything with the disease from a therapeutic standpoint. There is a wide field for our experiment station veterinarians in the investigation of this malady, as it militates very

much against successful high-class horse breeding in the South.

We have annually a large mortality among our hogs, and unfortunately the term hog-cholera with us is so comprehensive that it covers all the diseases the porcine tribe is heir to. Although the hog industry in our State is assuming considerable proportions, and the herds of pure-bred animals are becoming quite numerous, the majority of the hogs are range animals—principally “razor-back”—and their food consists of what they can get to eat in the woods. Large numbers of them die annually, mostly from gastro-intestinal troubles. There is perhaps less attention paid to the hog with us, from a hygienic point of view, than to any other of the domestic animals, and as the result of inbreeding and general unsanitary conditions and surroundings the animal death-rate is large.

During the months of May and June last the northern parishes of Louisiana experienced one of the most extensive and virulent, and, from a professional standpoint, interesting epizootics of anthrax that has occurred for many years. But before proceeding with the description I might state that sporadic outbreaks in the Mississippi bottoms are not at all uncommon. Last summer I was called to a large sugar plantation where three mules had died so suddenly that the owner had suspected foul-play, but on seeing the cadavers I was suspicious of anthrax. An autopsy on one of them revealed pathognomonic post-mortem symptoms of the disease, which a subsequent microscopical examination verified, by the identification of the bacillus anthracis in the blood. The mules were being fed crushed corn and rice bran—the former a product of the plantation; the latter an imported article. I suspected the bran as a probable vehicle for the spores, as the rice might have been raised on a place that had been previously infected. I advised the discontinuance of the bran, for the reason just stated, and no more deaths occurred; but a fortnight afterward the bran was again inadvertently resorted to, with three or four more deaths resulting. After this the bran was entirely discarded, and no more

fatalities from the disease have since occurred. Of course, the necessary sanitary precautions were adopted to check its ravages.

In the large cotton-growing sections in the northern portions of the State they have, generally in the spring, a condition in their mules which they consider anthrax, or charbon, as it is termed by our French population. It consists of an enlargement, often extending from the inguinal region to the xiphoid cartilage of the sternum, and in some cases to the carniform cartilage, but with no apparent constitutional disturbance whatever. Their treatment is extremely heroic, or, perhaps a better term would be, barbarous. Hot shovels, concentrated lye, the part saturated with turpentine and then set fire to, are examples, and if the poor animals survive this they usually recover, but with an eschar that they carry with them until death.

The condition is really one of anasarca, the result of indigestion. As soon as the animals have finished the work of cultivation they are turned into the cotton fields—after the cotton has been picked—to gather their living in the rows, in which there is a considerable quantity of grass, and for two or three months in many cases they receive no grain food whatever. When the time arrives in the spring for the ground to be broken the mules are brought up and without the slightest preparation are given full, hard-working grain rations.

During the prolonged interval between grain-feeding the system has become so inured to the light, easily digestible alimentation—which toward the last is somewhat scant—that it is generally more or less in a state of atony. The sudden change when in this condition to a more highly stimulating nitro-carbonaceous grain ration, requiring greater powers of digestion, produces indigestion, and from over-stimulation we have transudation of serum from the walls of the atonic blood-vessels, gravitating into the subcutaneous tissues on the lower portion of the abdomen.

As I have said, many believe this to be charbon, simply on account of the swellings; and if the animal—which really would

in many cases recover without any medical help—survived the treatment, they were firmly of the opinion that they had succeeded in curing the disease. Such is an example of the state of our knowledge regarding some varieties of disease and its treatment. The genuine outbreak, however, which I previously mentioned and wish now to describe, has perhaps done more to bring into prominence the regular graduate and the veterinary profession in our section of the country and to upset the calculations of the illiterate “charbon doctor,” with his vaunted “sure shot” charbon nostrums and reduce him to his proper place in the eyes of the intelligent class of people than anything that has happened within the last decade. It has been said that it takes a calamity to wake our people up, and the recent epizootic could be viewed as little short of that. The first indication I had of this outbreak was a dispatch from the general manager of a large cotton-planting syndicate, owning something like thirteen plantations, and four to six hundred head of mules. On one of the outlying properties, which was first affected, the disease was in a most virulent form, and the ultimate loss on this place was nearly if not altogether 100 per cent. Probably the most interesting point is that the outbreak was of cutaneous or carbuncular form, with flies as the transmission agents. The disease spread with such rapidity that it was in a very short space of time to be found doing its deadly work in some eight or ten parishes. The people were almost panic-stricken, and in their helpless condition, for want of intelligent information and from being largely in the hands of the “charbon doctors,” who expected to reap a rich harvest, their efforts were directed solely to the treatment of individual cases, without the slightest idea of trying to stay the ravages of the disease by any attempt at any modern system of sanitary science. Charbonous carcasses were simply hauled out to the woods, where range animals were grazing, infecting the surrounding country, besides presenting laboratories where flies of various specimens could obtain fresh virus for distribution. This dangerous procedure was adopted in the early part of the outbreak, with the result that animals of all

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kinds became affected, either from grazing over the infected pastures or devouring the flesh of the charbonous carcasses. It was reported that the deer in the swamps were succumbing to the disease, and several authentic cases of the disease in human beings were recorded, some proving fatal.

The disease having extended to range animals, which were altogether beyond control, the more domesticated stock, as the work animals, cows, etc., only could be dealt with as regards treatment. Realizing at once the gravity of the situation and the likelihood of an extensive spread of the disease, I at once suggested protective inoculation with the Pasteur anthrax vaccine, to try to protect the work animals, so that the farming operations would be delayed as little as possible. Fish-oil emulsion was sprayed daily over the animals to prevent the attacks of flies, which were in alarming numbers, and the police juries of the various parishes passed a sanitary ordinance compelling the cremation of all charbonous and other carcasses.

The therapeutic treatment followed was that suggested by Durain of an iodine and potassium iodide solution internally. Broken doses of mercurous chloride, combined with a saline, were also administered. The external enlargements—as early as possible—were injected at various points, by means of an ordinary hypodermic syringe, with a 5 per cent. solution of carbolic acid, with two grains of bichloride of mercury to the ounce of the solution. This treatment, which was to destroy infection in the local area and arrest absorption, had been suggested by Arnoldow in malignant pustules in the human being. Unfortunately it was impossible to procure sufficient of the protective lymph at the outset to inoculate such a large number of animals, as the entire supply in the stock of the Pasteur laboratory in this country became exhausted, and Europe had to be drawn upon to complete the orders. Gradually the flies seemed to disappear or change their location; the disease became much less virulent, and whereas in the beginning it claimed from 75 to 100 per cent. as its victims, toward the last 75 to 100 per cent. seemed to recover, even without vaccination.

In some of the infected districts visited I witnessed a most interesting and I should think most unusual spectacle, but whether or not it was the result of anthrax would require to be decided by experiment. In some fresh-water lakes, into which charbonous carcasses had been thrown, large quantities of fish could be seen floating on the surface of the water, dead. It has generally been considered that fish, owing to their lower temperature, were refractory to the disease. But here we had a temperature at the time of 90°F., or over, with the temperature of the water relatively high, which may have been sufficient to bring about changed conditions of vitality, and if the fish were at all poikilothermic, may it not have been possible and even probable that they became infected and died of intestinal anthrax? This is a very nice as well as a very important point, which is worthy of further investigation, because, if such is the case, fish, under such conditions, may become a very important factor in the spread of anthrax, not only to the lower animals, but to man himself.

The section over which this outbreak spread is flat, thickly wooded, subject to inundation and very swampy.

Although flies of all kinds are always very numerous in summer, one of the species of "*tobanus*, the '*tobanus lineola*'" was more so this year than had been noticed any year within the recollection of some of the oldest inhabitants. In fact, they were to be seen in the dwelling-houses in greater numbers than even the "*musca domestica*," at the height of summer; and during the time of their greatest numbers, animals were positively covered with them, and blood could be seen trickling down wherever the mouth-parts of the fly had been withdrawn.

The fly here being the transmissive, and the most important agent in the spread of anthrax, the thorough study of its life-history should engage the serious attention of the student of economic entomology. So far, I understand, the study of this species has not been satisfactorily prosecuted, on account of the difficulty of obtaining the ova and breeding the flies artificially, although it does seem to be known that the larva lives in damp

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earth and in water, and that the adult is abundant in the neighborhood of swamps. Many points of interest crop up as to the various ways, besides inoculation, it is probable for the fly to propagate the disease. I do not think it is a settled point whether or not the disease kills the fly. It is probable that the excreta of the fly may contain bacilli which afterward sporulate on the grass or herbage which is eaten by stock, etc. These and other points are worthy of elucidation for the protection and benefit of stock-owners, at all events, along the region of the Mississippi valley; and if some means could be discovered for the destruction of the ova or larvæ of this and other species of blood-sucking flies, it would be a tremendous boon to the inhabitants of my part of the world. This has been one of if not the most extensive outbreaks of anthrax on record, so far as I am aware, brought about by the external or cutaneous mode of infection.

I feel, gentlemen, I have occupied a great deal too much of your valuable time with a paper which contains so little of a scientific nature, but, if I have by chance touched upon any subject which may be of interest or perhaps benefit to any of you, I feel fully compensated for any little time or trouble I have taken in its preparation.

COMMUNICABLE ANIMAL DISEASES.

By W. HERBERT LOWE, D. V. S., PATERSON, N. J. *

A Paper read before the New Jersey State Sanitary Association, Dec. 12, 1896.

Mr. President and Gentlemen of the New Jersey State Sanitary Association:

The importance of the subject of communicable and infectious diseases of animals can hardly be overestimated if we consider the money value of the animal industry of this State, including the intrinsic value of the animals themselves for their respective kinds of service; the value of a wholesome and

* Former United States Veterinary Inspector of the Port of New York.

healthy meat production and the large dairy interests within the confines of New Jersey.

But the importance of the subject does not stop here. The economic is only one side of the question, for the public health and human life itself are dependent in no small degree on the physical condition and the healthfulness of our domestic animals.

Trichina, *echinococcus*, the beef and pork tapeworms, *strongylus gigas*, *actinomyces* and other parasites which affect man come directly from domestic animals. Glanders, rabies, anthrax, tuberculosis and other deadly microbial diseases that affect the lower animals can also be communicated to the human family. The closest relationship and interdependence exist between communicable or infectious diseases as they appear in animals and in man. Certain parasites make successive appearance in man and animals at different stages of their development, the same being a condition of their propagation. The *echinococcus*, the beef and pork tapeworms, and even the *trichinae* may be mentioned to illustrate this point.

Our present knowledge would indicate that it is impossible for the *echinococcus* of the beef *tænia* to live in the same host, or in a host of the same genus in both its larva and mature condition.

Man eats the meat and drinks the milk of the cow, which may convey the seeds of consumption to himself, for the tubercle bacillus of the tuberculosis found in the cow is identical with the germ of the human being. Recent bacteriological work and discoveries have thrown great light upon the cause and mode of transmission of infectious diseases affecting men and animals. Bacteriological science is but in its infancy, but enough has been learned to settle many problems and to determine rational and practical methods in the crusade against microbial and other communicable diseases.

It is not long since we were engaged in the work of the suppression and extermination of pleuro-pneumonia contagiosa from this State and nation. It will be recalled that the disease

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had a foothold in certain counties of this State, and at one time bade fair to invade the whole country; threatening the animal industry of the nation; entailing great money loss to a large part of the people. It did not take long for the people to reach legislative halls and secure proper State and national legislation for the suppression and the extermination of the plague. New Jersey is so situated geographically and the animal traffic so extensive that the work of extermination became no trifling matter. Our State Board of Health was ever diligent in stamping out new outbreaks and in limiting extensions of the disease, but it was practically impossible to prevent fresh introductions of the contagion without federal aid, which was not withheld. The work of extermination of contagious pleuro-pneumonia soon became a national question and the professional talent and the executive ability of that distinguished veterinarian, Dr. D. E. Salmon, the Chief of the United States Bureau of Animal Industry, was equal to the occasion, and the animal wealth of the nation has been protected and that dreaded plague exterminated from the United States.

I have alluded hastily to these facts connected with the extermination of pleuro-pneumonia contagiosa in the United States to show that the people of this country are not slow to protect the wealth of the nation from an animal plague. In the matter of contagious pleuro-pneumonia it was solely a financial question, as above indicated, for no one ever heard of a human being contracting bovine contagious pleuro-pneumonia, whereas in the case of many of the other contagious animal diseases, the health and the very lives of the people are endangered if proper sanitary and limiting measures are not adopted and if safeguards are not heeded regarding the meat and milk supply. It is an old saying that "health is better than wealth," but it seems to me that the truth of this saying is sometimes lost sight of by our people in their enterprise and the multiplicity of their affairs.

The caring for the contagious animal diseases in this State has during past years been entrusted to the State Board of

Health, and it is hardly necessary for me to allude to the effectiveness of the untiring efforts of our deceased fellow-laborer, the lamented Dr. Ezra M. Hunt. The good work inaugurated by Dr. Hunt is still being carried on and extended in many ways by the present able Secretary of the State Board of Health and his co-laborers. This board was successful last year in suppressing anthrax in Cumberland County and elsewhere in this State, and I am pleased to say that there has been no return of the disease during the present year. Forty-five cases of glanders were reported, of which number five cases upon examination showed no evidences of the disease. All the other cases were destroyed and action taken to prevent extension of the disease. The mallein test has been employed as a diagnostic agent in suspicious cases with satisfactory results. In speaking of glanders I am reminded of a farcy case presenting some dangerous and alarming features that came under my observation some two or three months ago. A poor man bought a horse with sores on its legs, being told by the seller that the sores were only fly-bites. His twelve-year-old daughter bathed the sores for a week or more, when I was called. I explained to the parents the nature of the disease in the horse and the danger of inoculation to the girl and advised treatment. Fortunately the girl has shown no symptoms of the disease, and as two or three months have elapsed it is probable that she was not inoculated with the virus.

The limits of my paper are such that I must pass on rapidly. But before doing so let me state that the investigation and control of one single infectious disease has assumed such importance in our State from both a sanitary and from a financial standpoint that the legislature two years ago, if I remember rightly, took the control of it out of the hands of the State Board of Health and passed a law creating a special commission on tuberculosis in animals. This commission unfortunately is limited in power and in funds. But nothing has prevented them from prosecuting the duties imposed upon them to the full extent of the means at their command. Under the statute they

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can only act when *requested* by the State Dairy Commissioner, the State Board of Health, or at the request of the owner. They have no power under the law of their own volition to examine any herd, no matter what its condition may be, without the request or consent of one of the foregoing. When the commission organized and commenced its work some individuals were strongly opposed to it. These people mostly did not understand the insidious, chronic nature of tuberculosis and that it was transmissible to the human family. Others from selfish motives were afraid that it would hurt their dairy business, and so on. The commission, however, soon proved itself equal to the exigencies of the work. Its experienced and able Secretary, the Hon. Franklin Dye, inaugurated what was essentially "a campaign of education." His far-seeing intelligence told him that the only real danger to the ultimate work of the commission was an ignorance on the part of dairymen, cattle-men and others, of the essential nature and danger, not only to the animals, but to the health and wealth of the people themselves. When we consider that tuberculosis kills more people than any other disease among mankind and that the tubercle bacillus of tuberculosis is transmissible from the cow the importance of the question that confronts us becomes more evident from a sanitary standpoint. The commission is a most conservative and safe body, moving slowly, but surely, doing effective work. When called upon it inspects an infected herd, making a careful physical examination of each individual animal and testing with tuberculin any cases that cannot be diagnosed without its aid. Diseased animals are condemned, appraised, killed and autopsies made and owners are paid three-fourths of the appraised values. Premises are disinfected. The matter of proper ventilation, sunlight and good sanitary conditions in general are encouraged as far as possible.

No public work where so many interests are involved was ever conducted without criticism and opposition to some extent, but I must say that I am surprised at the support given the New Jersey State Tuberculosis Commission by producers and con-

sumers. Both see the importance and value of healthful food products, and I have yet to meet the man that has had dealings with the commission that was not well satisfied and was not ready to support the furtherance of the work.

The "campaign of education" has been already productive of much good. The preliminary work so far has been judicious, careful and thorough. It does not speak well for the people that this commission should be hampered in the important trust that has been committed to its care. I therefore bespeak for the commission that the legislature be asked to enact necessary amendatory legislation and appropriate sufficient funds to prosecute successfully the work in hand.

Before concluding these fragmentary remarks, I would invite your attention to what I personally believe to be a very important phase of the subject from an economic standpoint, which I referred to quite fully in an address recently delivered before the County Veterinary Medical Association of New York, at the New York Academy of Medicine. I refer to the necessity of breeding animals of greater constitution, stamina and vigor. The fact that tuberculosis is caused by the tubercle bacillus and is therefore not hereditary, does not lessen the importance of breeding dairy cattle having substance and stamina sufficient to resist infection and development of the micro-organism. We all know that in time of war a city that is not properly fortified is easily taken by the enemy. So, the animal body, if not fortified with a strong constitution and stamina, will be readily invaded by the micro-organisms of infections. The proper pabulum or soil for the development of microbes is only second in importance to the microbe itself. All persons exposed to infection of tuberculosis, small-pox, or scarlet fever, do not take the disease because all are not alike susceptible. All men that eat the flesh or drink the milk of tuberculous cows do not contract tuberculosis. Whatever in any degree weakens or impairs the system of men or animals renders them liable to the invasion of disease. The animal that inherits a strong constitution and good health from its progenitors possesses a disease-resisting

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power that often means an immunity. If this principle of heredity was kept in mind in breeding dairy cattle there would not be so much tuberculosis. Environment, sanitary conditions, climate and food have also important influences upon the causation and development of tuberculosis, which department of the subject I hope to be able to treat more fully upon some future occasion. There is little benefit to be derived from destroying affected animals if you keep on breeding weak, delicate and deteriorated cattle, which, when developed and forced to their full milking capacity, and stabled in a crowded, ill-ventilated, damp, dark, filthy and unsanitary condition, will not be able to resist the dreaded micro-organism.

This breeding problem promises great and far-reaching results, if intelligently carried out by our farmers and breeders. In the human family no such theory could be carried out, but in the animal kingdom there is nothing to prevent, and I trust that the matter will receive the consideration and attention that it deserves.

FISTULOUS WITHERS.

BY W. J. MARTIN, V.S., KANKAKEE, ILL.

A Paper read before the Illinois State Veterinary Medical Association, Nov. 18, 1896.

Owing to its prominence in the equine species, the dorsal region is exposed to many traumatic injuries. One of the most common of these, and at the same time obstinate diseases which affect the horse's body is that pathological condition known as fistulous withers. The name is by no means an elegant one, but, like many others used in veterinary nomenclature, is very expressive of the location of the malady.

The location of fistula is usually on the right side of the body, near the summit of the superior spinous process of the dorsal vertebræ; it frequently extends backwards from about the fifth to the tenth dorsal spine; quite often it involves both sides of the withers. The anatomy of the region is so well known to all practical surgeons that no minute anatomical de-

scription need be given here of the muscles, bones and ligaments involved in this disease.

Etiology.—The causes of fistula are often obscure. In many cases fracture, or bruise of the superior spinous process of the dorsal spines or necrosis of the tuberos ends of the same, almost invariably gives rise to it. Injuries to the dorsal spines are generally caused by the animal rolling upon some hard substance, such as a stone in the pasture or in getting cast in a narrow stall. Running against low shed or barn doors, low hanging timber of trees in the pasture, are often prolific causes of this disease. It is often caused by the animal's skin being infested by parasites, such as the *sarcoptes equi*, *dermatodectes equi*, and other itchy skin affections, which cause the animal to rub its neck and shoulders in a violent manner against fences or the corners of buildings. Horses at pasture, more especially young animals, are much given to the habit of playfully seizing each other with their teeth over the withers; thus producing an abscess and often a fistula. Anatomical confirmation often plays an important part in the cause of this disease. Horses whose dorsal spines are abnormally high and ragged, are much predisposed to this disease; again, heavy draught animals, whose withers are low and broad, are likely to have the parts excoriated by the saddle-tree of the harness slipping forward while engaged in drawing heavy loads. In text-books on veterinary medicine and surgery, the most common cause of fistula mentioned is that caused by an ill-fitting saddle. This, I have no doubt, is in the main correct, though in the section of country in which I reside, horses are seldom used for saddle purposes; still, fistula of the withers is quite common.

Fistula may also make its appearance as a sequela to attacks of influenza, purpura hæmorrhagica or in general debility in which the animal's blood is left in a vitiated condition. I can recall to mind one instance in practice, in which, during one week, there came under my care six cases of fistula, all of which had recovered but a short time previously from influenza. From this it would appear that the septicæmic product of a

specific disease in the blood of an animal can, by extravasation through the walls of the blood vessels, localize itself in the glands or tissues of an organic being and there set up inflammation from which pus is generated, which in turn destroys the texture of these tissues and thus gives rise to a true abscess. I am aware that this theory is denied by some pathologists, they claiming that the specific germ of a disease is never found in any form of pus unless the cavity containing this pus has had free access to external air containing the specific germs.

Symptoms.—The time during which a fistula may exist without exciting the owner's attention is sometimes quite long. A small tumor, often not larger than an orange, may be present for several weeks or even months without causing the animal any inconvenience other than a slight itchiness of the parts. Perhaps at this stage of the disease there is no discharge from the enlargement; in the majority of cases but one side of the withers is affected, and this is usually the right one. During this primary stage of the malady, appearances are quite deceptive; all this time the disease is burrowing down among the muscles and tissues and destroying them. In many of these apparently mild cases the dorsal spines will be found to be considerably diseased. The contents of the fistulous sac during this early stage (and usually long afterwards when not interfered with surgically) is a thin straw-colored fluid in which flakes of clotted lymph float free. Where any of the various blistering liniments have been applied by the laity to "scatter the bunch," this fluid is changed into a thick creamy pus when the animal is healthy and in good flesh; it may also be thin and of a sanious nature, foul smelling and streaked with blood, when the animal is emaciated and in ill-health. I am aware that many authors divide the many injuries and diseases found upon the withers into several classes, such as œdemas, hæmatomas, cysts, abscesses, etc. For my part, I have been unable to make these nice distinctions in actual practice, finding that one or the other usually ends in a case of fistula.

Treatment.—The late Dr. D. Hayes Agnew said in regard to

the treatment of fistula in the human species, that all fistulous tracts and sinuses should be laid open by a probe-pointed bistoury and the cavities packed with dry or oiled lint. I have also found this to be an excellent method of treating this class of diseases in the equine species. For several years past my treatment of fistula has been wholly surgical. I do not believe in the use of caustics for this disease, for by their use much destruction of healthy tissue is caused. Again, caustics often cause a permanent thickening of the entire dorsal tissue on each side of the bones, rendering the animal oftentimes worthless for hard labor. I rarely think of using antiphlogistics to allay inflammation in the parts. This is, I must confess, in the majority of cases, valuable time lost. Usually by the time the animal comes under the hands of the surgeon all primary inflammation has subsided. I much prefer at this time a smart blister, well laid on, composed of the ointments of red iodide of mercury and cantharides in combination, two parts of the former to one of the latter. This serves to hasten suppuration, thins the skin over the tumor and leaves the parts in an excellent condition for the operation. In regard to the constitutional treatment: when the animal is much emaciated a generous allowance of food must be given. This may be further supplemented by iodide of potassium, hyposulphite of sodium, sulpho-carbolate of zinc, or the liquor acidi arseniosi, as the case may require. I place, however, more implicit confidence in a generous supply of food, and that of the most nutritious kind, than in any medicinal agent given internally.

Operation.—It is seldom necessary to cast an animal for this operation. A good twitch firmly applied to the upper lips serves fairly well to keep the animal quiet. A much better operation can be performed with the animal standing than in the recumbent posture. If setons have to be inserted deeply, it is often impossible and positively dangerous, to attempt this while the horse is cast, for by its struggles it not only endangers itself, from the long, sharp seton-needle, but the hands of the operator as well. It is only in cases of long standing and where the ani-

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mal has become extremely vicious from the repeated injections of caustics, that it becomes necessary to confine the animal; even then it is often impossible to operate properly without first administering chloroform. The hair and mane over the tumor having been removed by clipping, or, better still, sheared, the parts are thoroughly washed with warm carbolized water, in which all the instruments for the operation have been immersed; a straight incision extending from nearly the summit of the dorsal spines, is made through the centre of the tumor and is carried downward through the muscular tissues to near the border of the cartilage of prolongation of the scapula, if found necessary to do so. This insures good free drainage for the entire diseased mass. Bleeding vessels can be easily closed by torsion with the artery forceps after making the main incision. The fistulous canals are now sought for with the index finger of the left hand and as found are to be laid open their entire length with a probe-pointed bistoury, or, better still, a long-bladed hook-shaped knife made expressly for the purpose. After being thus laid open, the fistulous tracts are thoroughly curetted, which removes all remaining false membranes. Should any of the dorsal spines be found to be diseased they can be readily cleaned off with the bone forceps or periostotome. No muscular or other sound tissue is to be removed *en masse*, as this leaves a blemish and further exposes the dorsal spines to further injuries. Where both sides are diseased, it is best to select for the incision that side on which the enlargement is greatest, and from this pass the seton through to the opposite side. Sometimes but one of these will be required; then again, where the sinuses run forward and downward toward the cervical vertebræ, as many as two or three may be needed to give proper drainage to the cavities.

The object of this operation is to change into one healthy sore what was previously a mass of suppurating flesh, permeated by many fistulous canals. After thorough irrigation of the cavity with carbolized water, a pledget of oakum or absorbent cotton is gently packed into it, the edges of the wound are now brought together by a couple of interrupted sutures to hold the pledget

in position, and the operation is complete. The after treatment is quite simple. Within 48 hours after the operation, the sutures and pledget are removed; the cavity is again thoroughly irrigated with carbolized water, and when dry is dressed with carbolized oil. I have never found it necessary to keep the edges of the wound sutured, as this has a tendency to retard the free flow of pus; the wound will gradually close up and leave no blemish without them.

In treating wounds of this kind absolute cleanliness must be observed. If in summer, washing once or twice a day with warm water and castile soap must be done. When dry the parts may be anointed with carbolized oil, 1:30 is strong enough. In winter washing should be done but seldom or not at all, as by the chilling influence of the air healing is retarded. Pure carbolized adepis or lanolin is then the best dressing to use over the entire diseased parts. In summer I use no compress or covering of any kind, save a piece of muslin sheeting saturated in the oil and laid over the parts to keep flies away. In winter a light woolen blanket, placed over the withers, serves to protect the wound from the cold.

To sum up.—The great *desideratum* in treating fistulous withers is (a) to make one common sore of the entire diseased tissue with a good dependent opening for the discharge of pus. (b) After the operation, let the parts severely alone; do not probe or handle the parts needlessly, as by so doing you interfere with the healing process. (c) Feed the animal well; because an animal in good condition makes a much better and quicker recovery than one in poor flesh.

The time required for the entire healing of a fistula under this method of treatment will vary, some healing in from three to four weeks, and some where the healing will require six to eight weeks.

Recurrence.—Where the operation has been properly performed and the animal not put to work too soon afterwards, I find recurrence to be very rare.

INVERSION OF THE UTERUS.

By E. S. FRY, M.D.C., ASSISTANT STATE VETERINARIAN, NAPERVILLE, ILL.

A Paper read before the Illinois State Veterinary Medical Association, Nov. 19, 1896.

This disease or accident, as I may term it, is liable to occur in all domesticated animals, and has been observed in animals kept in houses and stables, as well as in those roaming about at liberty, although history will give us, and I find in my own experience, that ruminants are most liable to this accident, the cow coming first, then the sheep and goat; the mare is less frequently affected, and the sow and bitch perhaps not so often as the mare. This accident may take place in two forms, viz., partial or complete inversion of the uterus. In the partial or incomplete inversion there may be nothing seen externally, for in this case the cornu or horn of the uterus is not involved, but even may be partially inverted, and an exploration with the hand alone reveals the existence of the accident. Or, if the animal is lying, and especially if the floor is sloping backwards, the uterus appears as a round tumor between the labia of the vulva. In the complete form of inversion we have prolapsus of a portion of the vagina. This inversion is recognized also in two forms or degrees, according as there is inversion of the body of the uterus, or inversion of the cornu as well. If both cornua are completely inverted, they terminate inferiorly in the form of a cone or pear shape, and if only one cornu is involved it will readily be recognized, which is then deviated to the right or left of the vertical direction of the body of the organ, according as it is one or the other of these parts.

Causes.—The causes of this disease or accident are not well understood; hence it is difficult for me to ascertain what this cause is or may be; but in order that this inversion can take place it is essential that the os uteri be more or less dilated. Consequently the accident is only observed in breeding animals, and either during or soon after parturition. Steel claims that it results from excessive spasmodic contractions of the uterine walls, non-contractions of the os uteri *post partum*, or adhesions

of the foetal membranes to the walls of the uterus, or that it is especially frequent in animals in a state of debility. Prof. McIntosh claims that the immediate cause of inversion is relaxation of the ligaments of that organ, whose duty it is to retain it in its position. Fleming says a flaccid, non-contracted uterus after birth, with a weak cervix and dilated os, and relaxed broad ligaments, we should certainly look upon as a predisposing condition; and this is most likely to be present in lymphatic animals, or those suffering from atony, brought about by debility through disease, or bad or insufficient food, or exposure to weather. Others claim that the accident occurs only in animals of a plethoric or lymphatic temperament and their consequent laxity of tissue; and it is often the case that cows which are soft, and kept on food that is better suited for the production of milk than flesh, are most frequent subjects of inversion. In my own experience I have noticed that when these spasmodic contractions of the uterus (called labor pains) take place, there is some cause of irritation in the operation, and while the sympathetic nerves are in all probability those which are most concerned in the uterine contractions, as they are the motor nerves of the organ, their influence is called forth by this irritation. The physiology of parturition teaches us that the expulsive force by which parturition is effected resides in the unstriped muscular fibres of the uterus, which cause the organ to contract in a rhythmical and somewhat peristaltic manner, the contractions of the abdominal muscles and diaphragm being merely auxiliary, and as parturition progresses, and the separation between the uterus and foetus increases during each regular pain, the whole of the uterus contracts, though the fundus does so most energetically, the longitudinal muscular fibres of the organ being more particularly brought into play. The cornua likewise contract, and are shortened through the action of the longitudinal fibres, and are brought nearer the body of the uterus, which is also shortened; and as this shortening is always taking place in the direction of the cervix, it is here that the sum total of the expelling force is centred. It is this force,

commencing to operate at the fundus of the organ, for the extrusion of the foetus. We find that the thorax and shoulders of the foetus, when they arrive at the inlet of the pelvis, and as they form the deepest and most difficult part of the young creature's body, the contractions which ensue for its expulsion are most powerful and continuous, in order to impel it slowly towards the outlet. Now, as this is done, the space increases between the fundus of the uterus and the body of the foetus (as mentioned before), and to expel the croup these contractions are still powerful and continuous, and when the circular muscular fibres do not contract in proportion to what the longitudinal fibres do inversion is inevitable.

Treatment.—In treating inversion of the uterus the first step necessary is to combat the local symptoms. Should the foetal membranes still be adherent to the uterine surface, they must be carefully removed. If there are any torn or gangrenous portions of mucous membrane they are also to be excised in the same manner. If the uterus is torn it may be necessary to close the wound by sutures. When this is done the uterus should be cleansed from all foreign matters adhering to its surface, which may be effected by means of a soft sponge or cloth, the fluid employed being either warm water, warm water and milk, or even warm fresh milk alone. And last, but not least, the antiseptics, which are a very important factor in this operation (creolin preferred). Have the animal in a standing position if possible. If you have to reduce it in a recumbent position, place the animal on its back, and as soon as it is returned into the abdominal cavity turn the animal on its side. Alluding to the standing position, when the preliminary measures are done, ready for the reduction or reposition of the uterus, saturate completely the entire mass with cotton-seed oil; then put a cloth or towel well moistened, held by two assistants, under the uterus, so that the organ may be lifted as high as the vulva. By doing so there is neither traction nor compression on the mass, and it allows the operator more freedom, and at the same time assists its reposition. Then, with well-oiled hands and arms and closed fists, seek for the

largest cornu, seize it by the fundus, and reduce this by pushing it upward and inward. Great care is necessary in exerting the pressure, which should not be applied while the animal is straining. During expulsive efforts, the operator must be content to wait, merely keeping the parts where he has carried them, until the straining has ceased. The pressure must be steady and well directed, so as not to bruise or lacerate the organ. When one portion is gotten within the vulva, it is held there with one hand while the other hand manipulates the next part to be returned. If there be partial inversion of the vagina, the best method is to return first the parts of the organ nearest the vulva, and not act directly on the fundus of the uterus until the greater portion has been replaced into the pelvis. When the uterus has been placed into the abdominal cavity, the operator has then to ascertain if it is properly disposed. It is, therefore, necessary that the hand of the operator should carefully examine every part of the interior of the uterus, and if any abnormal folds of the mucous membrane are encountered they must be gently smoothed down or adjusted. When this is accomplished the straining ceases. It is generally advisable to keep the hand in the uterus and employ gentle manipulations around the cervix for a short time until the latter begins to contract freely. Then raise the hind parts of the animal as high as possible, and the work is completed.

In regard to using a truss or pessary, I never had occasion to employ them in my practice, and I have had a great deal of experience with this accident in cows and mares. The after-treatment consists in stimulants and proper dieting. Amputation of the uterus can be done successfully; but I have not had occasion to perform metrotomy.

HORSES IN THE ARMY.—The United States army at present possesses 6004 cavalry and artillery horses, 238 team horses and 3082 mules. During the past year 873 cavalry horses and 86 artillery horses were purchased at an average cost for cavalry horses of \$130 each, and for the artillery horses of \$149 each.

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VIVISECTION IN THE DISTRICT OF COLUMBIA.

SENATE BILL 1552.

FOR THE FURTHER PREVENTION OF CRUELTY TO ANIMALS IN THE DISTRICT OF COLUMBIA.*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That hereafter no person shall perform on a living vertebrate animal any experiment calculated to give pain to such animal, except subject to the restrictions hereinafter prescribed. Any person performing, or taking part in performing, any experiment calculated to give pain, in contravention of this Act, shall be guilty of an offense against this Act, and shall, if it be the first offense, be liable to a penalty not exceeding one hundred and fifty dollars, and if it be the second or any subsequent offense, shall be liable, at the discretion of the court by which he is tried, to a penalty not exceeding three hundred dollars, or to imprisonment for a period not exceeding six months.

SEC. 2. That the following restrictions are imposed by this Act with respect to the performance on any living vertebrate animal of an experiment calculated to give pain to such animal; that is to say:

(a) The experiment must be performed with a view to the advancement by new discovery of physiological knowledge, or of knowledge which will be useful for saving or prolonging life or alleviating suffering; and

(b) The experiment must be performed by a person holding such license from the Commissioners of the District of Columbia as in this Act mentioned, or by a duly authorized officer of the Government of the United States or of the District of Columbia; and

(c) The animal must, during the whole of the experiment, be completely under the influence of ether or chloroform sufficiently to prevent the animal from feeling pain; excepting only that in so called inoculation experiments, or tests of drugs or medicines, the animal need not be anaesthetized nor killed afterwards; nor in tests of surgical procedure need animals be kept completely anaesthetized during the process of recovery from the surgical operation. Otherwise than this, the animal must be kept from pain during all experiments; and,

(d) The animal must, if the pain is likely to continue after the effect of the anaesthetic has ceased, or if any serious injury has been inflicted on the animal, be killed before it recovers from the influence of the anaesthetic which has been administered; and

(e) No experiment shall be made upon any living creature, calculated to give pain to such creature, in any of the public schools of the District of Columbia; provided as follows, that is to say:

First. Experiments may be performed under the foregoing provisions as to the use of anaesthetics by a person giving illustrations of lectures in medical schools, hospitals, or colleges, on such certificate being given as in this Act hereafter mentioned, that the proposed experiments are absolutely necessary for the due instruction of the persons to whom such lectures are given, with a view to their acquiring physiological knowledge or knowledge which will be useful to them for saving or prolonging life or alleviating suffering;

Second. The substance known as urari, or curare, shall not, for the purposes of this Act, be deemed to be an anaesthetic; and

Third. Notwithstanding anything in this Act contained, no experiment calculated to give pain shall be performed on a dog or cat, except upon such certificate being given as in this Act mentioned, stating, in addition to the statements hereinbefore required to be made in such certificate, that for reasons specified in the certificate the object of the experiment will be necessarily frustrated unless it is performed on an animal similar in constitution and habits to a cat or dog, and no other animal is available for such experiment; and an experiment calculated to give pain shall not be performed on any horse, ass, or mule, except on such certificate being given as in this Act mentioned, that the object of the experiment will be necessarily frustrated unless it is performed on a horse, ass, or mule, and that no other animal is available for such purpose; and

* As favorably reported to the Senate May 26, 1896, by the Committee on the District of Columbia.

Fourth. Any exhibition to the general public, whether admission be on payment of money or gratuitous, of experiments on living animals, calculated to give pain, shall be illegal.

Any person performing or aiding in performing such experiment shall be deemed to be guilty of an offense against this Act, and shall, if it be the first offense, be liable to a penalty not exceeding one hundred and fifty dollars, and if it be the second or any subsequent offense, shall be liable, at the discretion of the court by which he is tried, to a penalty not exceeding three hundred dollars or to imprisonment not exceeding six months; and any person publishing any notice of any such intended exhibition by advertisement in a newspaper, placard, or otherwise, shall be liable to a penalty not exceeding ten dollars.

A person punished for an offense under this section shall not for the same offense be punishable under any other section of this Act.

SEC. 3. That the Commissioners of the District may insert, as a condition of granting any license, a provision in such licensee, that the place in which any such experiment is to be performed by the licensee is to be registered in such manner as the said Commissioners may from time to time by any general or special order direct: *Provided*, That every place for the performance of experiments for the purpose of instruction shall be approved by the said Commissioners, and shall be registered in such manner as the said Commissioners may from time to time by any general or special order direct.

SEC. 4. That the Commissioners of the District, upon application as hereinafter prescribed, may license any person whom they may think qualified to hold a license to perform experiments under this Act. *Provided* only that a license shall not be granted to any person under the age of twenty-five years, unless he be a graduate from a medical college, duly authorized to practice medicine in the District of Columbia.

SEC. 5. That the Commissioners of the District may direct any person performing experiments under this Act from time to time to make reports to them of the methods employed and the results of such experiments, in such form and with such details as the said Commissioners may require.

SEC. 6. That the President of the United States shall cause all places where experiments on living vertebrate animals are carried on in the District of Columbia to be from time to time visited and inspected without previous notice, for the purpose of securing compliance with the provisions of this Act, and to that end shall appoint four inspectors, who shall serve without compensation, and who shall have authority to visit and inspect the places aforesaid, and who shall report to the President of the United States from time to time the results of their observations therein, which shall be made public by him.

SEC. 7. That any application for a license under this Act, and for a certificate to be given as in this Act mentioned, must be signed by three physicians duly licensed to practice and actually engaged in practicing medicine in the District of Columbia, and also by a professor of physiology, medicine, anatomy, medical jurisprudence, materia medica, or surgery in the medical department of any duly established and reliable school or college in the District of Columbia: *Provided*, That when any person applying for a certificate under this Act is himself one of the persons authorized to sign such certificate, the signature of some other of such persons shall be substituted for the signature of the applicant.

A certificate under this section may be given for such time or for such series of experiments as the persons signing the certificate may think expedient.

A copy of any certificate under this section shall be forwarded by the applicant to the Commissioners of the District, but shall not be available until one week after a copy has been so forwarded.

The Commissioners of the District may at any time disallow or suspend any certificate given under this section.

SEC. 8. That the powers conferred by this Act of granting a license or giving a certificate for the performance of an experiment on living animals may be exercised by an order in writing, under the hand of any judge of a court of record having criminal jurisdiction in the District, in a case where such judge is satisfied that it is essential for the purposes of justice in a criminal case to make such experiment.

Hon. James
Senate.

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LETTER OF DR. C. W. DABNEY, JR.

UNITED STATES DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
WASHINGTON, D. C., May 16, 1896.

Hon. James McMillan, Chairman Committee on District of Columbia, United States Senate:

DEAR SENATOR: I have the honor to invite your attention to certain provisions of the bill S. 1552 and of a substitute which I am informed the Committee on the District of Columbia has decided to report favorably. The bill is entitled "A bill for the further prevention of cruelty to animals in the District of Columbia." The principal purpose of the bill as disclosed by its several sections is to restrict and prohibit those experiments upon animals without which it is impossible to obtain the facts required for the advancement of the biological sciences, and particularly for understanding the nature of disease and discovering the best means for its prevention and cure. As the Bureau of Animal Industry of this Department is charged by law with the duty of investigating and controlling animal diseases, and as it has made and is making more extensive investigations of said diseases than any other institution in the United States, the work of said bureau would be directly and seriously affected by legislation such as is proposed in this measure. The bill, while ostensibly local legislation, would affect principally the work of the Executive Departments, and more particularly the scientific investigations of the Department of Agriculture.

1. The bill provides that hereafter no person shall perform on a living animal any experiment calculated to give pain to such animal, and it makes any person guilty of an offense who performs or takes part in any such experiment which in any way contravenes the provisions of this bill, and for such offense, if the first, he is liable to the excessive penalty of \$150 fine, or if the second offense he is liable to a fine of \$300 or to imprisonment for a period not exceeding six months. These extreme penalties would discourage investigators, they would cause hesitation and delay in the performance of necessary experiments, for no one would enter upon a series of researches until he had satisfied himself that he could carry them through without even a technical violation of the act, and that he could satisfy even unfriendly inspectors that there was no technical violation. Such hesitation and delay is fatal to experimental work of the character performed in this department. It often requires months, sometimes years, to find an outbreak of disease of the right type, and with the affected animals at the proper stage, to yield results to the investigator. If it is a contagious disease, the experimental animals must be exposed to or inoculated with the liquid excretions or tissues of the affected individual; and this must be done under a variety of conditions. Such material is perishable and when found must be used at once; the experiments for which it is suitable must be immediately planned and executed, otherwise the valuable material is lost; hence the desirability of leaving investigators free from unnecessary restrictions and of encouraging them to their best efforts by recognizing their valuable contributions to the cause of humanity. The effect of this section would be to place experimentation upon animals under the ban of the law, to put a stigma upon it, and to cause those engaged in such researches to expend a large part of their energy and ability to avoid infraction of the numerous restrictions.

2. It is provided in section 2, paragraph a, that such experiment must be performed with a view to the advancement *by new discovery* of physiological knowledge, or of knowledge which will be useful for saving or prolonging life or alleviating suffering. That is to say, it forbids all experimentation to confirm the results obtained by others, or to determine whether their results are exactly accurate, or whether such conclusions apply under the conditions which obtain in this country. This provision at once prohibits a large part of the necessary experimental work of this department and would seriously cripple the remainder. Every experiment becomes an offense which does not lead to an immediate practical result. It so happens, however, that no one experiment can give such results except in extraordinary cases. Science is built up by degrees. We progress a step at a time, and many experiments must be made to determine the facts in the case before we can foresee the results. If the experimenter must stop to consider whether he can demonstrate to the satisfaction of a court that each individual experiment was "performed with a view to the advancement by new discovery of physiological knowledge, or of knowledge

which will be useful for saving or prolonging life or alleviating suffering," it is not likely that he will accomplish much by his work.

3. "The experiment must be performed by a person holding such license from the Commissioners of the District of Columbia as in this act mentioned." The substitute bill adds the words "or by a duly authorized medical officer of the Government of the United States or of the District of Columbia." The provision in each bill is objectionable. The first-mentioned bill makes the work of this department dependent upon the action of the Commissioners of the District of Columbia and would allow these Commissioners to dictate as to the persons who should be employed in this scientific work. The substitute bill allows experiments to be performed by a duly authorized medical officer of the Government of the United States without license. This would still exclude a large proportion of our men engaged in experimental work, who, while graduates in science, and perfectly competent, could not be considered medical officers. It appears from an examination of the records that some of our best men in the past would not have been allowed to serve under this provision.

4. The bill provides that "notwithstanding anything in this act contained, no experiment calculated to give pain shall be performed on a dog or cat, except upon such certificate being given as in this act mentioned, stating, in addition to the statements hereinbefore required to be made in such certificate, that for reasons specified in the certificate the object of the experiment will be necessarily frustrated unless it is performed on an animal similar in constitution and habits to a cat or a dog, and no other animal is available for such experiment; and an experiment calculated to give pain shall not be performed on any horse, ass, or mule, except on such certificate being given as in this act mentioned; that the object of the experiment will be necessarily frustrated unless it is performed on a horse, ass, or mule, and that no other animal is available for such purpose."

Section 7 provides "that any application for a license under this act, and for a certificate to be given as in this act mentioned, must be signed by three physicians duly licensed to practice and actually engaged in practicing medicine in the District of Columbia, and also by a professor of physiology, medicine, anatomy, medical jurisprudence, materia medica, or surgery in the medical department of any duly established reliable school or college in the District of Columbia: *Provided*, That when any person applying for a certificate under this act is himself one of the persons authorized to sign such certificate, the signature of some other of such persons shall be substituted for the signature of the applicant.

* * * * *

"A copy of any certificate under this section shall be forwarded by the applicant to the Commissioners of the District, but shall not be available until one week after a copy has been so forwarded.

"The Commissioners of the District may at any time disallow or suspend any certificate given under this section."

These provisions prevent the use of five species of animals in experiments, except upon special certificate being given. The form of this certificate and the manner in which it is to be obtained or given, are indefinite, and it can not be clearly understood from the language of the bill what kind of a certificate is intended. The fact that an application for a certificate must be signed by three physicians, and by a professor in a medical college, makes the work of an Executive Department of the United States Government dependent again in this instance not only upon the Commissioners of the District but upon the action of individuals in the District of Columbia, who have no connection either with the United States Government or the District Government. Such a provision is, I believe, unprecedented in legislation affecting the Executive Departments.

The language quoted makes it plain that a certificate must be given for each experiment, or certainly for each series of experiments made upon any of the animals mentioned. As these certificates are not available until one week after a copy has been forwarded to the Commissioners of the District, experiments upon these animals are practically prohibited. As before explained, experiments can not be planned or performed until the material to be used in such experiments is obtained, and such material being perishable, a delay of a week would lead to its total loss, and thus prevent the experiment being carried out. This

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VIVISECTION IN THE DISTRICT OF COLUMBIA.

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refers to experiments with contagious diseases or with animal parasites, which are the principal ones conducted under the direction of the Bureau of Animal Industry.

All investigations concerning the diseases of horses, asses, and mules would practically be stopped by the proposed legislation and the testing of horses with mallein to determine if they are affected with glanders would only be possible after a week's delay to obtain a certificate. Glanders is one of the diseases which it is the duty of the Bureau of Animal Industry, in coöperation with the Commissioners of the District of Columbia, to eradicate from the District. If a suspected horse is found it should be tested at once. A delay of a week gives an opportunity for the escape of the animal from supervision, and is under any circumstances a hardship to the owner as well as a peril to the people and horses exposed to the affected animal. Efforts to control contagious diseases must be prompt and vigorous if they are expected to bring success. Such legislation as is proposed in the bills mentioned would make the eradication of glanders impossible.

5. It is provided in section 4 of the substitute bill that a license shall not be granted to any person under the age of twenty-five years, unless he be a graduate from a medical college, duly authorized to practice medicine in the District of Columbia.

This provision effectually excludes from experimentation any graduate in science under twenty-five years of age, unless he is duly authorized to practice medicine in the District of Columbia. It would at once stop some of the experiments now in progress, and if it had been enforced in past years would have prevented a large proportion of our scientific employees from doing this class of work. Taken in connection with paragraph b of section 2, which provides that experiments must be performed by persons holding a license from the Commissioners of the District, or by a duly authorized medical officer of the Government of the United States or of the District of Columbia, it is readily seen that young men, graduates in zoology, or in other collateral sciences, could not make experiments even if they were competent and in the service of an Executive Department of the Government.

6. The bill also provides that the Commissioners of the District may direct any person performing such experiments under this act from time to time to make reports to them of the result of such experiments, in such form and with such detail as the said Commissioners may require. The substitute bill makes this report cover the methods employed, as well as the results of the experiments. This provision is objectionable, because it makes the employees of an Executive Department subject to the directions of the Commissioners of the District in making their reports. It permits reports to be called for before the investigations are completed, and the official work of these experts might be stopped at any time by a demand from the Commissioners for a report as to the methods being employed and the results of the experiments.

I would respectfully suggest that it is improper, and not in accordance with precedent, for the employees of an Executive Department of the Government to report directly to the Commissioners of the District. Their report should be made to the head of the Department, and if any report is to be made to the commissioners it should be made by, or transmitted through the head of the Department. Even this would be objectionable, as the work of the Department should not in any way be subject to or dependent upon the local authorities.

7. It is provided in section 6 "that the Commissioners of the District shall cause all registered places to be from time to time visited by inspectors, without previous notice, for the purpose of securing compliance with the provisions of this act, and shall appoint and authorize an agent of the Washington Humane Society to make such inspection, and may also appoint such special inspectors as they may think fit, either permanently or temporarily, who may be willing to act as such inspectors gratuitously."

The substitute bill provides "that the President of the United States shall cause all places where experiments on living vertebrate animals are carried on in the District of Columbia to be from time to time visited and inspected, without previous notice, for the purpose of securing compliance with the provisions of this act, and to that end shall appoint four inspectors, who shall serve without compensation, and who shall have authority to visit and inspect the places aforesaid, and who shall report to the President of the United States from time to time the results of their observations therein, which shall be made public by him."

It must be plain that the results of all these limitations and restrictions and of this espionage will be the prevention of scientific research rather than its regulation. As long

as this Department is directed by Congress to make investigations of animal diseases, and to provide for their suppression and control, the Department should be left free to carry on such work in such manner as may seem best to the Secretary of Agriculture in order to attain the end in view. The Department must always be under the direction of responsible officers who may be called upon by the President at any time for information, and a board of inspection composed of persons not in the Government service and who serve gratuitously is not needed and would not be in the interest of efficient service.

8. An apparent concession is made in section 2, paragraph c, which provides "that in so-called inoculation experiments or tests of drugs or medicines, the animal need not be anesthetized nor killed afterward, nor in tests of surgical procedure need animals be kept completely anesthetized during the process of recovery from the surgical operation." This concession is, however, apparent rather than real. The investigator remains subject to all the other limitations of the bill: (1) If not a duly authorized medical officer of the Government of the United States or of the District of Columbia, he must first obtain a license (sec. 2, b.) (2) His application for a license must be signed by three physicians duly licensed to practice medicine and actually engaged in practicing medicine in the District of Columbia, also by a professor of physiology, medicine, anatomy, medical jurisprudence, materia medica, or surgery, in the medical department of any duly established reliable school or college in the District of Columbia (sec. 7). (3) The Commissioners may require the place where the experiments are made to be registered (sec. 3). (4) If under twenty-five years of age, and not duly authorized to practice medicine in the District of Columbia, he cannot obtain a license (sec. 4). (5) He must, if authorized to experiment at all, confine his experiments to the advancement by *new discovery* of physiological knowledge or of knowledge which will be useful for saving or prolonging life or alleviating suffering (sec. 2, a). (6) If the experiment is to be made upon a dog, cat, horse, ass, or mule, a certificate must be given (it is not specified by whom) stating in addition to certain other statements that for specified reasons the object of the experiment will be necessarily frustrated unless it is performed on an animal similar in constitution to a cat, dog, horse, ass, or mule and that no other animal is available for such purpose (sec. 2, par. e, 3d part). (7) Any application "for a certificate to be given as in this act mentioned must be signed by three physicians duly licensed to practice and actually engaged in practicing medicine in the District of Columbia, and also by a professor of physiology, medicine, anatomy, medical jurisprudence, materia medica, or surgery in the medical department of any duly established reliable school or college in the District of Columbia: *Provided*, That when any person applying for a certificate under this act is himself one of the persons authorized to sign such certificate, the signature of some other of such persons shall be substituted for the signature of the applicant." (8) Such certificate shall not be available until one week after a copy has been forwarded to the Commissioners of the District (sec. 7). (It is not stated to whom the application for this certificate shall be made.) (9) The investigator must hold himself ready to report at any time to the Commissioners of the District both the methods employed and the results of the experiments in such form and with such details as the said Commissioners may require (sec. 5). It makes no difference how premature the report may be, or how damaging to the investigator to publish it before the results are completed, there is no recourse. (10) The investigator, his animals, methods and experiments are to be subject to the constant inspection and espionage of four inspectors to be appointed by the President, who shall serve without compensation, and who shall report to the President the results of their observations (sec. 6).

It can hardly be supposed that a scientific man could master all of these requirements and limitations of the law without embarrassment and injury to his work, or that he could conduct a series of experiments to a successful issue without contravening some of them and making himself liable to the extreme penalties provided for such an offense. The assertion that the effect of either the original bill or the substitute will be simply to regulate experiments and prevent abuses are absurd in the light of an analysis of the provisions. The effect will be practically prohibitive, and there is good reason to believe that this is the result aimed at by those who drafted the bills.

It appears that this bill, S. 1552, was formulated by the anti-vivisection committee of the Washington Humane Society (Annual Report, 1895, p. 24) and I am informed that a substitute bill has more recently been proposed by the said anti-vivisection committee. An examination of the proposed substitute does not, however, disclose any material modi-

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fication of the provisions existing in the original bill. Both have evidently been drawn by persons hostile to scientific investigations which must be made through experimentation upon animals. The sentiment of the society which procured the drafting of these bills is well summarized in the report of its president for the year 1894. He said :

"The subject of vivisection [experiments upon animals] has been frequently before your executive committee during the past year, and but one sentiment has been expressed, viz., that of utter abhorrence and condemnation of the inhuman practice which, according to the oft-expressed opinion of the best physicians and surgeons, is of no practical value to science or medicine." (P. 18.)

It is not surprising that people holding such views should endeavor to graft them upon the legislation of the country, and we must bear in mind the fact that those who drafted these bills are hostile to experimentation and desire to abolish rather than to regulate it.

The investigations which the Bureau of Animal Industry has made have been so successful as to attract the attention of the scientific world, and they have required constant experimentation upon animals. Some of these experiments have been painful to the animals operated upon, but they have been in charge of scientific and humane persons who have exerted themselves to prevent any unnecessary suffering. Such experiments which are intended to supply the knowledge required for protecting our domestic animals from disease and for securing a food supply from them uncontaminated by disease, and which also contribute to the prevention and cure of human maladies, are less subject to the charge of cruelty, even though they cause pain, than are the ordinary practices of dishorning, emasculation, branding and slaughtering, all of which are countenanced for economic reasons and cause more pain than do scientific experiments. So long as we admit that an animal may be caused to suffer the intense pain of castration in order that it may be more economically raised and better suited for the service of man or for the production of edible meat, so long as we permit millions of delicate calves to be burned with a red hot iron upon their sensitive skins in order that they may be identified, and so long as we admit that animals may be killed by painful processes to supply us with food, it is inconsistent to say that they can not be used in experiments necessary for the advancement of knowledge, the relief of suffering, and the saving of property and life.

The first investigations of this kind which this Department was directed by Congress to make related to the diseases of swine, and these investigations have been continued until those diseases which caused the principal losses are well understood and can be controlled by the application of proper measures.

The Bureau of Animal Industry was established principally to avert the great danger which threatened our cattle industry from the existence on our territory of that cattle plague known as the contagious pleuro-pneumonia of bovine animals. Other countries had struggled with it in vain, but it had never up to that time been eradicated from any country in which it had gained a considerable distribution. The nature of the disease and the best methods of controlling it were imperfectly understood. The experiments made here upon animals gave sufficient information, however, to enable those charged with the work to mark out a systematic and scientific plan of operations, which led to the complete eradication of the disease in less than five years. Although four years have passed since this work was completed, the predictions of the scientists have been fulfilled to the letter, and no cases of the disease have been found during that time. Previous to this work being undertaken the disease had existed constantly and extensively for more than forty years, and many persons had become so accustomed to it that they freely predicted its immediate reappearance even if it was stamped out.

An illustration of the absolute necessity of experiments upon animals to settle contested questions relating to disease may be drawn from the existing restrictions of the British Government on the American cattle trade. Although there has been no pleuro-pneumonia in this country for over four years, the British inspectors frequently condemn our cattle as being affected with that disease. The American inspectors and many European veterinarians hold that the disease actually discovered is ordinary pneumonia arising from exposure during the ocean voyage. How then can this difference of opinion between the British and American officers be settled? Not by clinical observation, not by discussion, not by diplomacy, for all of these have been tried. A scientific and incontestable demonstration could be made by exposing healthy cattle to those said to be affected with con-

tagious pleuro-pneumonia. This would be a final and unanswerable test, but no such test can be secured. They have limited experimentation upon animals in Great Britain by law. Objections have been raised to such an experiment, and this question cannot be brought to a final issue. If the bill under discussion should unfortunately become a law, an experiment could not be made at the seat of the United States Government to settle this important question, even should it become possible for other reasons to make the experiment here. The experiment would be calculated to give pain; it would not be an inoculation experiment, or a surgical procedure, and, consequently it would be necessary, according to this bill, to keep the animals in the experiment, say twenty head of cattle, completely under the influence of ether or chloroform for the three or four weeks during which the animals might feel more or less pain. Such a requirement is absurd and impossible of fulfillment.

This is not an unusual or overdrawn case. It is only an illustration of contested or unsolved questions frequently coming before this department for solution, and which it is of the greatest importance to the agricultural industry to have settled reliably and permanently.

Another great work which the Bureau has done by experimenting upon animals is the elucidation of the nature, the mode of dissemination, and the means of preventing the disease known as Texas fever of cattle. This disease was causing enormous losses to farmers by death of their stock, was demoralizing the cattle industry of a number of Western States and Territories, and was causing such fatality among cattle en route to foreign countries that the propriety of admitting our animals was questioned, and insurance during the summer months was advanced to 10 per cent. of the value of the animals. Now all of this has been changed. Outbreaks of Texas fever in this country are rare and unimportant, and the insurance on export cattle has been reduced to 1 per cent. or less.

These are only a small part of the results accomplished by the Bureau of Animal Industry through its kind of experimentation. Such researches are difficult, and they are only successfully conducted where the conditions are favorable and where the investigators are stimulated by friendly encouragement and support. It may be safely said that under hostile legislation, classifying such experiments as a form of cruelty, surrounding them with numerous limitations and restrictions, subjecting the experimenter to the espionage of intolerant inspectors and threatening him with excessive penalties for infractions of any of the many requirements, the success which we now point to with pride would not have been achieved.

There are still many problems relating to animal diseases which must be investigated and solved by this class of experiments before the animal industry can yield to our farmers an adequate return. Agriculture demands and should receive all the assistance which can be given to it by the most advanced scientific methods employed under the most favorable conditions. We find to-day many of the dairy herds affected to the extent of 70 to 90 per cent. with tuberculosis; we find the swine fed upon the refuse milk of such dairies affected with the same disease, and we have every reason to believe that much of the tuberculosis in people comes from the same source. Is the Bureau of Animal Industry to be interrupted and hampered in its study of this and other diseases by legislation alleged to be for the prevention of cruelty to animals when the promoters of this legislation have failed to show that any improper experimentation has been conducted or is likely to be conducted in the District of Columbia?

Are the vital interests of agriculture in the whole United States to be made subservient to the demands of an over-zealous and intolerant local society, which appears incapable of taking a broad and liberal view of this subject? Are we prepared, in order to protect a few dogs, cats, and other animals, from sufferings less than these animals usually undergo when they die a so-called natural death, to have legislation enacted which would withdraw the efforts of the scientists who are working for the relief of the hundreds of thousands of men, women, and children who now die annually in this country from preventable diseases? Are the millions of animals which suffer and die from animal plagues every year less worthy of attention than the few which die with less pain in the research laboratory? These questions appear not to have occurred to those who are advocating this legislation. The effort to limit, obstruct, and prohibit such experiments, although it originates from humane societies, is not in the cause of true humanity. It ignores the interests and sufferings of mankind and would perpetuate these sufferings to carry into effect

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what is clearly an erroneous view of what constitutes kindness and humanity to the lower animals.

If the legislation already enacted for the prevention of cruelty to animals in the District of Columbia is shown to be insufficient for this purpose, and additional legislation is thought desirable, this legislation should be so framed as not to affect the Executive Departments of the United States Government, and under no circumstances should local legislation be allowed to interfere with, demoralize or prohibit the important scientific investigations which are specifically authorized by Congress for the benefit of the great agricultural industry of the whole country.

Agriculture at this time needs the encouragement and assistance which the experimental work of the Bureau of Animal Industry is bringing to it. Much has already been accomplished, but even greater results are promised in the near future. It is an age of science and progress, and all other industries are rapidly advancing through scientific research. Should not our farmers receive all possible aid from the same source?

Very respectfully,

CHAS. W. DABNEY, JR., *Acting Secretary.*

REPORTS OF CASES.

THE GOAT CANNOT ALWAYS EAT SHOW BILLS WITH IMPUNITY.

By W. C. SIEGMUND, D.V.S., Baltimore, Md.

On the morning of January 15th, I was called in great haste to see a sick goat. I found on my arrival at the party's house one goat dead and another suffering intense abdominal pain. Hasty observation revealed symptoms of arsenical poisoning, and I at once administered such antidotes as I found on hand in the nearest drug-store, iron rust and magnesium sulphate, in solution, following this by the whites of eggs. The symptoms meanwhile had become more pronounced, pain most excruciating, manifested by most pitiful cries and restlessness of the poor brute. Pulse was imperceptible. I attempted to take the temperature, but the animal gave evidence of such pain upon the attempt to press the thermometer into rectum, that I gave it up. Having sent for some apomorphia I set about to prepare my hypodermic-syringe and needle, so as to inject the drug as soon as it came, when the animal died.

I performed autopsy on both carcasses, and found acute gastro-enteritis in both animals, involving the entire digestive tracts, to such an extent as to have blood oozing from the mucous membranes. The ingesta of the stomachs contained small particles of a greenish mass, which I looked upon as Paris green. I preserved some of it in a bottle for chemical examination. I then proceeded to search the premises for traces of the poison and found a scrap of "green paper" upon which the goats had been gnawing in the wood pile of the owner, and which paper is the remnant of a Christmas tree ornament. The city chemist

kindly made an analysis of the ingesta and green paper and found them to be of one and the same coloring matter, which, unfortunately for the two goats, is the arsenite and acetate of copper, or Paris green.

The case is also interesting from the fact that the owner has a tame sheep and another goat, neither of which were in any way affected, simply because the other two were "cock of the walk" and always chased the other two animals away.

Inclosed you will please find a small scrap of the paper that did the mischief. Both animals were fed plentifully and were in good condition.

REMOVAL OF CLITORIS FOR VICIOUSNESS.

By S. H. JOHNSTON, V. S., Carroll, Iowa.

A mare was brought to me, which was very vicious, and seemed to be continually suffering from œstrum. Removed the clitoris about three months ago; the owner informs me she is perfectly docile and can be driven by a child.

ODONTOID.

By S. H. JOHNSTON, V. S., Carroll, Iowa.

A three-year old colt was suffering from what looked to be a canker of the ear; owner informed me that a swelling appeared when about three months old which developed into a running sore and had been treated by caustics, but got no better. After making an incision down on the annular cartilage discovered what proved to be a well developed tooth. After abstracting, the colt made a rapid recovery.

TUBERCULOSIS IN MASSACHUSETTS.

Apropos of the recent changes in the policy of Massachusetts in dealing with tuberculosis in that State—from the tuberculin test to the physical examination (except by request)—we print that portion of the Governor's message bearing upon this subject, which will give the reader a clearer idea of the policy to be in force under the reorganized Cattle Commission:

"I commend to the most careful consideration of your honorable bodies the question of the eradication or limitation of this disease in cattle. The conditions affecting its presence in cattle

and its transmission to man are to be determined by scientific investigation, and in the countries of Europe, as well as in our own land, are better understood than when the danger was first realized. There can be no doubt that in the advanced stage of the disease, especially when it has attacked the udder, the milk as well as the meat of the animal so diseased may convey the tubercle bacillus, and therefore become a grave danger when taken into the human system. If sterilization were universal, the danger from milk so affected would be removed. In the earlier stages of the disease, the danger is regarded by many competent authorities as slight, but it must be remembered that the tendency of the disease is constantly to advance. The existing law restricts the use of tuberculin to cattle brought into the commonwealth from any point without its limits, and to cattle held at certain quarantine stations, but provides that it may be used, on the consent in writing of the owner, upon animals in any other portion of the State, and upon animals condemned as tuberculous upon physical examination. This restriction expires by limitation on the first of June, 1897. The community is yearly becoming better informed on this subject, and therefore better prepared to adopt measures which shall be inspired neither by an exaggerated alarm on the one hand nor on the other hand by an unreasonable opposition to necessary sanitary precautions. With the co-operation of local boards of health and with the dissemination of accurate information on the subject by the board of agriculture and other agencies, it may be expected that the action of the State will be re-enforced by the normal, healthy pressure of customer upon dealer, in demanding a general improvement in the sanitary condition of dairies, and their immunity from this dread disease through the application of this test, undoubtedly the most reliable yet discovered. Whatever general line of policy your wisdom may adopt, I ask you to consider two suggestions: Is it right or wise that, as now, the State should pay full value for animals that have reached the most advanced stage of general tuberculosis and udder tuberculosis? Such animals should be sought out by means of a thorough, periodic inspection, and slaughtered as being not only worthless, but a source of danger to the rest of the herd as well as to the community. At present the owner has no motive to check the disease in its earlier stages. If compensation were graded according to the condition of the animal as revealed by autopsy, the owner would have a direct interest in purging his herd of infected animals before they become worth-

less. Secondly, I think the commissioners should in any event have sufficient means at their disposal to enable them to test with tuberculin all cattle the owners of which request such inspection."

EXTRACTS FROM EXCHANGES.

GERMAN REVIEW.

By W. V. BIESER, D.V.S., New York City.

GLYCERIN AS AN OBSTETRIC HELP.—Since Pelzer's employment at Frank's suggestion of glycerin for this purpose further trials have substantiated their results, but with the decided drawback of having in some instances caused the death of the patient. Its object was to excite uterine contractions. The author could not believe that under proper precautions glycerin was a deadly remedy; he believes not so much in its water abstracting powers as in its powers to excite contraction of unstripped muscle fibre. He injected only 5 ccm. instead of the large doses of 80 to 100 ccm. and sees that the glycerin only enters the cervical canal below the internal os, and not the uterine cavity, the cervix being the originator of the uterine contractions. Trials made with the remedy in this way gave most brilliant results. Two cases are appended. In one at the end of 40 weeks of pregnancy, in the other at the end of 35 weeks, no signs of uterine contractions had shown themselves. Yet, for certain reasons labor had to be induced especially as live offspring were the prime object. In both cases 5 ccm. used as above described excited potent contractions and led to happy terminations. The author recommends glycerin very highly. —(*Berl. Thierärzt. Woch.*)

IODINE AND IODIDE OF POTASH AS ANTIDOTES IN PURPURA HEMORRHAGICA.—The case in question was that of an old mare, which at the beginning of the treatment was in an almost hopeless state. Tracheotomy had to be performed during the illness to prevent suffocation. For several days no food passed her lips; she was so weak as to be hardly able to be moved to a more hygienic stable. For three days in succession two intratracheal injections of 10 grains of iodine and 50 grains of iodide of potash were given, whereupon quick improvement set in; the mare regained her appetite, the swellings resolved and convalescence set in in a short time. —(*Berl. Thierärzt. Woch.*)

HEMORRHAGIC MENINGITIS IN A COW.—A twelve-year-old cow, well nourished, lost appetite one day, fell down next day and showed upon examination by the author the following clinical picture: The eyes were half closed and had a dull look; one pupil was contracted, the corneal sensibility was diminished, cutaneous sensibility likewise, although there was no decided anæsthesia; the induction current caused a very strong reaction; the forcibly drawn out tongue was immediately drawn in again. Muscular activity, especially in the rear half of the body, was disturbed. The temperature was 40° C., respiration deep but unlabored. Milk secretion was diminished. Next day the pulse was feebler, respiration stertorous, and peristalsis audible; the paralysis, diminished sensibility, etc., were the same as upon the day previous. On the third day the pulse was very feeble and thready, the heart impulse fluttering, respiration very deep and labored; the lower halves of both lungs were unaerated, there were friction sounds heard upon expiration. The animal was thereupon slaughtered. Autopsy showed: Liver, spleen, kidneys, gastro-intestinal tract normal. The lungs were attached to the chest wall at their lower borders by fibrinous adhesions; the pleuræ were thickened, congested, dull, with fibrinous deposits upon their surfaces. The affected portions of both lungs, *i. e.*, the lower half of the right lung and the lower two-thirds of the left lung were wholly airless, solid and juicy, but relatively anæmic. The bronchi and bronchioles were partly filled with bloody serum, partly with reddish foam. The heart and blood were normal. Upon opening the cranium a considerable quantity of yellowish serous fluid exuded, chiefly located in the space between the dura and pia mater. The pia mater was thickened and velvety to the touch. In the left hemisphere in front a broad extravasation, covering nearly the whole surface of the pia mater and extending backward to the olfactory lobes, showed itself. The pia mater, even as far backward as both olfactory lobes, was thickened and hemorrhagic. The ventricles and blood vessels were distended. The parenchyma of the brain was little altered. This condition of affairs in the brain undoubtedly explained the physical symptoms. The cause of the meningitis, traumatism being excluded, was hard to determine. The sudden and marked onset of the symptoms of depression were probably due to the sudden rupture of the ventricles, whose elasticity was, considering the age of the cow, probably markedly impaired.—(*Berl. Thierärzt. Woch.*)

DIPHTHERIA IN A CAT.—Upon January 18th, 1896, a lady

sickened with diphtheria in Clifton and died three days later. A cat that had been received into the house on Jan. 4th and had remained in the lady's room all this time was thereupon observed from Jan. 23 on. On Jan. 29th the cat sickened; she vomited, had diarrhoea, swelling of the throat, and yellowish spots upon the mucous membrane of the posterior portion of the buccal cavity. The yellowish areas enlarged until the whole throat was, on Jan. 31st, covered with a yellowish false membrane. The cat died from excessive dyspnoea. Unfortunately, no autopsy or bacterial examination was made; so that it is impossible to state positively whether the cat's sickness was identical with that of its mistress, or whether the cat was the original source of the deceased lady's illness, suppositions which the author considered very plausible, inasmuch as the cat was not observed until after the woman's death, which fact first drew attention to the cat's condition.—(*Berl. Thierärztl. Woch.*)

CONGENITAL TUBERCULOSIS IN CALVES.—K. of Kiel found very frequently besides tubercular peritonitis tuberculosis of the uterus and genital tract in cows. But frequent as was the genital tuberculosis, all the more infrequent was the discovery of tuberculosis in the calves begotten by these mothers, which calves by reason of the mothers being tubercular were slaughtered on the first day before they could partake of the mother's milk. Upon investigation, however, he found congenital tuberculosis to be more frequent than was supposed. While between the years 1887 and 1895 only nine such calves slaughtered in the way aforesaid proved to be tubercular at the autopsy, he found 26 cases of congenital tuberculosis from January to May in the year 1896. Eleven of these showed evidences of tuberculosis in the portal lymphatics and liver, nine besides these evidences, evidences of tuberculosis in other organs; in ten instances various other lymphatics were affected. In the calf most affected, the peritoneum and pleura showed many sharply localized highly reddened nodules, and several diffuse flat granulations (tubercular); one lung showed a calcareous nodule with translucent periphery; tubercular deposits in the portal, bronchial and mediastinal lymphatics as well as in all the peripheral lymphatics, all having calcareous centres with cheesy peripheries; the liver showed many tubercular nodules; the kidney one of small size calcareous, with congested periphery. As regards the infection, the transmission of the materies morbi to the growing ovum is undoubtedly due to the diseased uterus infecting the placenta of the ovum. Hence

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congenital tuberculosis is not so rare as was supposed. These data are very instructive as furthering our knowledge of tuberculosis.—(*Berl. Thierärzt. Woch.*)

TREATMENT OF FOREIGN BODIES IN THE ŒSOPHAGUS.—A horse had a pill given it which remained, as subsequent examination showed, wedged in the Œsophagus. The administration of 0.007 gm. of arecoline hydrobromicum. caused after 15 minutes the foreign body's passage into the stomach. Pilocarpin, according to J., has a similar action. The author therefore recommends the administration of either or both of these remedies when occasion offers.—(*Berl. Thierärzt. Woch.*)

EUCAIN IN OPHTHALMOLOGY.—Eucain is a new anæsthetic; cheaper and less poisonous than cocaine and with less disturbing properties than cocaine. The hydrochlorate of eucain dissolves in water, retaining its anæsthetic properties even after boiling, but, on the contrary, it is only partly soluble in 2 per cent. sublimate solution. V. used it as he did cocaine in 5 per cent. solution. The instillation of eucain causes much more burning than cocaine, each new instillation causing fresh smarting. The anæsthesia sets in in 2 to 3 minutes in the cornea and conjunctiva, diminishes gradually after 8 to 12 minutes and disappears entirely after 15 minutes. The following advantage claimed by the firm (Schering), viz., non-dilation of the pupil, absence of paresis of the muscles of accommodation, did not materialize to any marked extent. With cocaine one had been very long warned that it might cause unnatural dryness of the corneal epithelium owing to the diminution in lid activity caused by the cocaine; eucain does the same to a more marked degree, robbing the cornea and conjunctiva of their protective covering by paresis of the lids and causing in time a total separation of the corneal epithelium from its base. Even sewing the lids together won't prevent this. Hence eucain can't supplant cocaine.—(*Berl. Thierärzt. Woch.*)

ENGLISH REVIEW.

RUPTURE AND DISPLACEMENT OF THE KIDNEYS IN A COLT [*By E. W. Hoare, F.R.C.V.S.*].—A colt, which had always been well, was found unable to get up. The animal was constantly looking at his flanks, and struggling violently. The rectum was full of hard fæces, which were removed with injections. The bladder was empty. No tympanites, excessive sensibility of the loins. The treatment consisted of hot fomentations of the

loins, warm drinks and castor oil. The condition of the patient grew worse, the pains increased more and more, soon broke into profuse perspiration, the mucous membranes became of a livid color, and death took place after a few hours. At the post-mortem the kidneys were found softened, the right extensively bruised and its fibrous capsule torn, and both organs loose from their attachments. The surrounding muscles were free from any injury.—(*The Veterinarian*.)

OSTEITIS OF THE TROCHANTER [By W. M. Scott, M. R. C. V. S.].—A five-year-old mare had been treated for the last six months, and has at present on the coxo-femoral joint a rather large swelling, hard, like bone, and which is rendered more prominent by the atrophy of the surrounding muscles. There are two fistulous tracts extending towards the joint. Standing up the animal rests her whole weight on the sound leg; the diseased one is flexed and carried in adduction, and sometimes is resting on the toe of the other. In motion, the leg is carried in abduction, carried forward with hesitation; the step is short. Backing is very difficult and turning on one side painful. The animal was destroyed. At the post-mortem, the muscles of the gluteal and crural regions were infiltrated, some of them almost ossified. The superior part of the femur showed a large bony tumor separated from the body of the bone, and kept in place by fibrous adhesions. It looked as if there had been a fracture on the upper part of bone which was healed only by ligamentous union.—(*The Veterinarian*.)

INTRACAPSULAR HÆMORRHAGE OF THE LIVER [By Mr. J. A. W. Dollar].—A fifteen-year-old horse is attacked with colic; he drops some fæces, urinates, has an anxious face, the pupils dilated, the gait is stiff; he has muscular twitchings and the body is covered with a sticky perspiration; the mucous membranes are pale, the pulse small and weak, 94 beats; the temperature $37^{\circ}9$ C.; respiration 30, short, loud. The animal walks about in his box and paws; his neck is stretched, his upper lip contracted and turned up. His sight seems impaired. After an injection of morphine, which puts him to sleep for awhile, he suddenly gets up, his pulse rises to 130–140 per minute, his respiration to 30. Temperature cannot be taken. The next day the horse seems better,—pulse, respiration, and temperature are improved; there is slight jaundice. This condition lasted for eleven days, and was followed by sudden death. At the post-mortem there was an intra-abdominal hemorrhage and a marked general jaundice. The bronchial mucous membrane, the intestines, and the

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kidneys were yellow. The liver weighed fifty-eight pounds. The capsule of the left lobe of the liver was raised by a clot of blood. That of the right lobe was atrophied. Between the capsule and the tissue of the organ there was a large clot of blood weighing six pounds and a half. Upen sections of the liver, interstitial hemorrhages of various dates were found and rendered manifest by ecchymotic spots or bloody extravasations. —(*Veterinarian.*)

METASTATIC LAMINITIS FOLLOWING METRITIS [*By George Green, M.R.C.V.S.*].—A mare that had dropped her colt easily did not clean, and the placenta had to be removed three days after, when symptoms of metritis were becoming manifest. The treatment consisted in hot fomentations to the loins; opium, aconite and belladonna internally; nitrated drinks. Improvement soon appeared, but all of a sudden symptoms of laminitis showed themselves in both fore feet. Hot poultices were applied, linseed oil, with one dose of aconite administered; then blisters to the feet. Mare recovered rapidly.—(*Veterinarian.*)

SOCIETY MEETINGS.

VETERINARY MEDICAL ASSOCIATION OF NEW YORK COUNTY.

The regular monthly meeting of the Veterinary Medical Association of New York County was called to order at 8.45 P.M., January 6th, 1897, at the Academy of Medicine, with the President, Dr. Huidekoper, in the chair.

The following members responded to roll-call: Drs. Amling, Bell, C. C. Cattanach, J. S. Cattanach, J. S. Cattanach, Jr., Caulfield, Ellis, Farley, Foy, Gill, Huidekoper, Hanson, Jackson, Loomes, Lellman, Neher, O'Shea, Robertson, Ryder, Sherwood, and Winslow (21).

The minutes of the previous meeting were read and approved.

Report of Board of Censors.—Dr. Gill (Chairman) reported that as the question of the legality of the expulsion of H. Clay Glover from the association had been referred back to the board for their consideration they wish to submit the following suggestions to the meeting, to wit: That the Secretary be authorized to send H. Clay Glover a complete copy of the charges and request him to appear before the board at the next meeting to answer the same. Said notification to be sent by registered letter. Moved and seconded that the report be accepted. Carried.

Reading of Papers.—Dr. Lellman then gave a report of a case of "Polyneuritis of a Dog." Moved by Dr. O'Shea and seconded by Dr. Robertson that a vote of thanks be tendered to Dr. Lellman for his essay.

Dr. Huidekoper then gave a most interesting discourse on "Strains." A discussion followed, which was participated in by Drs. Neher, Robertson, Farley, Gill and others. Moved and seconded that a vote of thanks be tendered Dr. Huidekoper. Carried.

Report of Judiciary Committee.—Dr. O'Shea (Chairman) read the following communication from the association's counsel :

NEW YORK, Dec. 19, 1896.

Dr. Rush S. Huidekoper, 154 E. 57th St., City.

DEAR SIR :—We beg to thank you for your letter of the 15th enclosing check. We have sent a receipted bill to Dr. Cattnach, as requested. We beg to enclose an affidavit in the Bryant case which Magistrate Cornell said could not be improved upon. We can no doubt adapt it to fill such other cases as may arise. In this connection we may call your attention to the fact that we have serious doubts whether under the provisions of the act of 1895 a person could be held for the commission of misdemeanor for merely operating without registration. Magistrate Cornell intimated that this was his view and that he would probably have to discharge Bryant if it had not been proved that Bryant appended a veterinary title to his name.

It would seem that the only remedy that the act provides for the practising without registration was a civil suit for the recovery of a money penalty for such offense. In view of this we can suggest that it might be advisable in any case where you could prove that the person complained of has assumed a veterinary title—that you should consult with us before proceeding to arrest him.

We are examining the papers in the Benson case and will send you our conclusion in a few days. The question involved is an important one and is not free from difficulties. With reference to the Mulvey case we have no doubt that the registration would be cancelled on proper application being made. Do you wish us to proceed?

Very truly yours,

VAN SCHAIK & NORTON.

The affidavit referred to is as follows :

POLICE COURT, CITY OF NEW YORK.

The People of the State of New York on the Relation of "The Veterinary Medical Association of New York County," Plaintiff

against

Newton S. Bryant, the name Newton being fictitious, defendant's real name being unknown, Defendant.

CITY AND COUNTY OF NEW YORK, ss :—Rush S. Huidekoper being duly sworn doth depose and say that he is the President of the Medical Association of New York County. That he hereby makes a complaint against the above named Newton S. Bryant, the name Newton being fictitious, said Bryant's first name being unknown to the deponent, and charges said Bryant with the following offenses against the laws and statutes of the State of New York :—

First.—That the said Bryant is practicing veterinary medicine and surgery within the County of New York without being previously registered and legally authorized or licensed by the Regents', and registered as required by the provisions of Chapter 860, sections 171 and 181, of the Laws of 1895, as amended by Chapter 840 of the Laws of 1896. That said Bryant has practised as follows : On or about Oct. 24th, 1896, deponent is informed and believes he operated on five horses in the stables of one John Doyle, of 140 W. 54th Street ; that on or about October 10th, 1896, he operated on the horses of one Proctor, at Tattersall's, at 55th Street and Seventh Avenue ; that in or about the

last week of September, 1896, he operated on the horses belonging to one Frank Work, at his stables, 157 W. 56th Street; that on or about October 10th, 1896, he operated on a number of horses at the stable of Strauss & Hexter, at 1722 Broadway; that on or about Oct. 19th or 20th, 1896, he operated on horses at Tattersall's, at 55th Street and Seventh Avenue.

That said statutes provide in Chapter 860 of the Laws of 1895, Section 184, that any person guilty of violating any of the other provisions of this act not otherwise specifically punished herein shall be guilty of a misdemeanor.

Second.—That said Bryant, without having been authorized to do so legally, appends a veterinary title to his name, assumes and advertises a veterinary title in such a manner as to convey the impression that he is a lawful practitioner of veterinary medicine or of one of its branches. That said Bryant issues and advertises his business by means of a printed circular which deponent has seen and which said Bryant has delivered to various persons known to deponent upon the first page of which is the following inscription, "Dr. N. S. Bryant, Veterinary Dentist."

That Chapter 860 of the Laws of 1895, in Section 184, provides "and any person who shall without having been authorized to do so legally appends any veterinary title to his or her name, or shall assume or advertise any veterinary title in such a manner as to convey the impression that he is a lawful practitioner of veterinary medicine or any of its branches shall be guilty of a misdemeanor."

The Doctor also assured the members of the association that a bill would be introduced by the committee this winter for the exemption from jury duty of veterinary practitioners of New York and Kings Counties.

Moved and seconded that the report be accepted. Carried.

President Huidekoper then reported on the progress of the "Blue Book."

Application for Membership.—An application for honorary membership was submitted as follows:

We hereby propose Prof. Alexander Liautard for honorary membership in the Veterinary Medical Association of New York County, as his life work has been devoted entirely to the elevation and advancement of the veterinary profession in this county.

(Signed) ARTHUR O'SHEA,

J. L. ROBERTSON.

H. D. HANSON.

This was referred by the chair to the Board of Censors.

The Secretary next read the resignation from the association of Thomas Giffen.

Moved and seconded that the report be accepted. Division of votes. Moved and seconded that the matter be laid over till the next meeting. Carried.

Moved and seconded that the meeting adjourn. Carried.

ROBERT W. ELLIS, D.V.S., *Secretary*.

CALIFORNIA STATE VETERINARY MEDICAL ASSOCIATION.

The annual meeting of this association was held in the rooms of the Baldwin Hotel, San Francisco, Cal., Dec. 9, 1896.

The meeting was called to order by the Secretary, Dr. D. F. Fox, who stated that as the President and Vice-President were both absent it would be necessary to elect a President *pro tem.*,

whereupon Dr. H. A. Spencer placed the name of Dr. Thomas Maclay in nomination, and as there were no further nominations Dr. Maclay was unanimously elected.

President *pro tem.* Maclay in the chair.

The roll was called and the following named gentlemen answered to their names: Drs. Maclay, Spencer, Sr., Spencer, Jr., Orvis, Archibald, Faulkner, Robin, Hogarty, Graham, Fox, Fabbi, Forrest, Jackson, and Williams. Visitor, Mr. Gilbert, of San Francisco.

The minutes of the previous meeting were read and approved.

A communication was read from the Pasteur Monument Committee, with an invitation for subscriptions to the fund, which was received and placed on file.

The Secretary's report was read and accepted and placed on file. The Treasurer's report was the next order of business, but as the Treasurer was absent his report was left over until the evening session.

Dr. H. Fabbi presented the name of F. DeBere, as an applicant for membership, and it was referred to the Board of Examiners.

Dr. Archibald made a report of the committee appointed to wait upon or communicate with the Governor of the State in regard to the quarantine districts of Texas fever. The report was accepted and the committee discharged.

He also made a report of the committee appointed to wait upon the Board of Health of San Francisco, with a view of prevailing upon them to try and bring about a more scientific and systematic course of meat and milk inspection in San Francisco. This report was also received and the committee discharged.

The committee appointed to draft an act to be introduced at the coming legislature, made their report. The bill was read and discussed by sections. After several suggestions had been offered, a few minor changes made and the blanks filled in the bill was considered as satisfactory to the association, and further report of the committee was postponed until the evening session.

The next regular order of business was then taken up, which was nomination of officers for the ensuing year. Dr. Maclay offered some objections to being re-elected as a member of the Board of Examiners, but upon the earnest request of the members present he allowed his name to remain in nomination for the above named office. Nominations for the several offices were

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then proceeded with as follows: For President, Dr. R. A. Archibald, of Oakland; Vice-President, Dr. J. Graham, of Fresno; Secretary, Dr. D. F. Fox, of Sacramento; Treasurer, Dr. C. L. Megowan, of Sacramento. Board of Examiners: Drs. Maclay, Spencer, Sr., M'Collum, Egan and Pierce.

Dr. Maclay moved that inasmuch as there had been but one nominee for each office that the Secretary be directed to cast the ballot for said officers, with the exception of Secretary, who should be elected by acclamation. As there were no objections it was so ordered. The ballot having been cast the President *pro tem.* announced the officers for the ensuing year as above stated and they were thereby declared elected.

New business was next taken up, and the subject matter of inspection of dairy cows was introduced, and it was brought to light that one J. C. C. Price was representing himself to be a qualified practitioner, and by so doing was holding a public position in San Luis Obispo County, that he was also obtaining tuberculin from the Bureau of Animal Industry and charging the persons for whom he was making the tests. Whereupon, Dr. H. A. Spencer introduced the following resolution:

WHEREAS, It having come to the knowledge of this association that one Jos. C. C. Price is representing himself as a qualified veterinary surgeon, and through such representations he has either secured, or pretends to have secured the appointment of stock inspector of San Luis Obispo County, and has represented that he is an appointee of the general government, and is securing pay from the owners for the use of government tuberculin,

Resolved, That by the report of the State Veterinary Medical Board of Examiners, this association is advised that said Jos. C. C. Price is not a qualified veterinary surgeon, and therefore we conceive it our duty to inform the Board of Supervisors of San Luis Obispo County and the Chief of the Bureau of Animal Industry of these facts, and that the Secretary of this association be instructed to write to the said Chief of the Bureau of Animal Industry, and the President of the Board of Supervisors of San Luis Obispo County apprising them of these facts.

The resolution was unanimously adopted and it was so ordered.

The subject matter of qualifications for membership was next taken up. Considerable discussion followed, and it was finally decided that Sec. 1 of Article VII of the by-laws was deficient in the respect that it did not compel all members of the association to abide by the laws of this State in regard to holding a certificate issued by the State Veterinary Medical Board of Examiners.

Dr. Thomas Maclay was appointed as a committee of one to make the proper amendments and to report at the evening meeting.

Upon motion the meeting adjourned until 7 P. M.

The evening session was called to order by the President *pro tem.*, Dr. Maclay, at 7 o'clock P. M. Upon roll-call Drs. Pierce and Megowan answered to their names, they having been absent from the afternoon session.

Installation of officers for the ensuing year was next taken up. Dr. R. A. Archibald, of Oakland, was escorted to the President's chair, and, after a few well chosen remarks, he proceeded with the regular order of business.

The Treasurer, Dr. Pierce, having withdrawn his presence prior to this, the Secretary was called upon to read the Treasurer's report, which he did; the report showed the association to be in a very good financial condition. The report was accepted and placed on file.

A resolution was now introduced providing for the appointment of a committee to wait upon or communicate with the faculty of the Veterinary Department of the University of California, and prescribing its duties; Dr. Thomas Maclay offered a few amendments to the resolution, which were adopted, and the resolution was then adopted as amended, as follows:

WHEREAS, The Veterinary Department of the University of California in the coming year is about to hold final examinations for the purpose of graduating such of its students as are capable of passing said examinations in a creditable manner, and

WHEREAS, We the members of the California Veterinary Medical Association believing it to be to the best interests of the veterinary profession in this State that said final examinations should be conducted by parties not connected with said veterinary college; therefore, be it

Resolved, That the President of this association be and he is hereby authorized and requested to appoint a committee to consist of three members of this organization, whose duty it will be to wait upon or communicate with the faculty of the said veterinary college, with a view of prevailing upon them to select a board of examiners, to consist of five practitioners, who are not in any way connected with said veterinary college, whose duty it will be to conduct said final examinations; and be it further

Resolved, That in case the faculty of said veterinary college ignore or refuse to accede to the request made by this committee, said committee is hereby authorized to wait upon or communicate with the Board of Regents of the State University and the Board of Trustees of the Veterinary Department of the University of California, with a view of prevailing upon them to investigate the manner in which said veterinary college is conducted, and to acquaint them of the necessity of adopting some such proposition as is embodied in these resolutions whereby the honor of the University of California and the veterinary profession in this State may be maintained.

The Board of Examiners now made their report on the name of F. DeBere, as follows:

Mr. President.—Your Board of Examiners to whom was referred the name of F. DeBere for membership in this association, having had same under consideration, beg leave to report unfavorably on said application and want to recommend the rejection of same.

Respectfully submitted.

THOMAS MACLAY, *Chairman.*

The report was accepted and the application rejected.

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The committee appointed to amend by-laws now made its report, as follows :

Mr. President.—Your committee of one appointed to submit an amendment to Sec. 1 of Article VII in accordance with opinions expressed during our afternoon session, beg leave to submit the following : Strike out all of Section 1 of Article VII and insert in lieu thereof the following :—Article VII, Section 1. It shall be the duty of the Board of Examiners to examine the applications of those who may apply for membership, provided the applicant presents a license to practice issued by the California State Veterinary Medical Board.

Respectfully submitted.

THOMAS MACLAY, *Committee.*

The report was received and referred to the Board of Directors.

Reading of papers and discussions being now in order, Dr. H. A. Spencer came forward with a most excellent and well prepared paper on "Reports of Cases."* The first portion of the paper was devoted to a few cases, which the essayist termed "Pneumo-Hepatitis." The cases were described in detail and were very interesting to all present. The next case which the essayist described was a case of embolism of the femoral artery, and the last was a case of epilepsy in a bitch. The paper brought out a long, spirited and interesting discussion, in which nearly all of the members present took an active part.

The next essayist called upon was Dr. C. L. Megowan, of Sacramento, who came forward with a most excellently prepared paper on the subject of "Professional Ethics."* He brought out a great many points which should be remembered in everyday practice.

The members paid high compliments to the doctor for the manner in which he had entertained them.

Mr. Green, Chairman of the Legislative Committee of the Dairymen's Association of California, was now shown in and the subject matter of legislation was again taken up. He submitted a bill for consideration which had been under consideration by the Dairymen's Association. The bill was read and considered by sections. After a great many suggestions had been offered and a few changes made, the bill was finally left for the Dairymen's Committee and Dr. Archibald, of the Association, to complete.

The report of the Committee on Legislation was then received and the committee discharged.

Dr. Fox moved that the thanks of the association be extended to Drs. Spencer and Megowan for the most able manner

* Will be published in March REVIEW.

in which they had entertained us during the evening, seconded by Dr. Hogarty, and so ordered.

The following named gentlemen were then appointed as essayists for the next meeting : Dr. G. F. Faulkner, of Salinas ; Dr. J. H. Eddy, of Stockton ; Dr. F. W. Skaife, of San Francisco ; Dr. F. E. Pierce, of Oakland ; and Dr. D. F. Fox, of Sacramento.

There being no further business before the meeting, it adjourned to meet in the Baldwin Hotel, San Francisco, on March 19, 1897.

D. F. Fox, *Secretary*.

THE ONTARIO VETERINARY ASSOCIATION.

The annual meeting of this association was held in the Veterinary College, Toronto, on Dec. 22d, 1896.

The meeting was opened with the President, Mr. H. Hopkins, V. S., of Green River, Ont., in the chair, who made a few well-chosen remarks on the benefits to be derived both individually and to the profession at large by attendance at these annual gatherings, and he hoped to see still greater interest taken in them in the future by all members of the profession in this Province.

The Secretary's, Treasurer's and Auditor's reports were received and adopted.

A motion was carried that the initiation fee be reduced to \$3.00 and the annual dues to \$1.00.

The following new members were duly proposed and accepted : Mr. Jas. Mayhew, V.S., of Cookstown, Ont. ; Mr. S. Lawson, V.S., of Acton, Ont. ; Mr. Lawson, V.S., of Dundas, Ont. ; Mr. R. F. Golden, V.S., of Windsor, Ont. ; Mr. Jas. Gregg, V.S., of Little Britain, Ont. ; Mr. J. H. Reed, V.S., of Guelph, Ont. ; and Mr. A. R. Metcalf, V.S., of Vankleek Hill, Ont.

A discussion then ensued on the proportion of the fines imposed under the provisions of the recent Veterinary Act that should be paid over to the prosecutors, these fines being the property of this association ; and it was resolved that as the association did not wish to be pecuniarily benefited by the fines, but wished to protect the profession, "That the greater part should be paid over to the prosecutor, and a small proportion only to be retained to defray necessary expenses."

The election of officers for the ensuing year then took place, with the following result : Major Lloyd, President ; Mr. S. Sisson, First Vice-President ; Mr. H. S. Wende, Second Vice-President ; Mr. Sweetapple, Secretary and Treasurer. Directors,

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MESSRS. W. Shaw, W. Gibb, J. W. Faskin, W. J. Wilson, John Wende, W. Steele, W. Cowan and R. F. Golden. Auditors, Messrs. C. Elliott and J. D. O'Neil. Delegates to the Western Fair Association, Messrs. J. H. Wilson, Sr., and J. D. O'Neil. Delegates to the Industrial Fair Association, Toronto, Prof. A. Smith and Major Lloyd.

The retiring President having vacated the chair in favor of the President-elect, a hearty vote of thanks was tendered to Mr. Hopkins for his able conduct in the chair and the interest he had taken in the association during his term of office.

Major Lloyd, on assuming the chair, thanked the members cordially for the honor conferred on him, and promised to do all in his power for the best interests of the association. Amongst other matters he urged upon all the members the benefits that might accrue if each one were to give an account at the next meeting of some case of special interest during the past year, even if it were only one case. But he hoped every one would endeavor to contribute something.

Prof. J. N. Reed, of the Guelph Agricultural College, gave an interesting account of some cases of cerebro-spinal meningitis that he had met with; he mentioned particularly the paralysis of the muscles of deglutition as one of the symptoms. He had had bacteriological examinations made of the water used, and he believed the cause of the disease to have been pathogenic bacteria in the water. Hyposulphite of soda and also nux vomica had been used in the medicinal treatment of the disease.

Mr. R. F. Golden, V.S., of Windsor, Ont., gave an account of the disease among swine that had existed in the county of Essex. He described the symptoms he had observed, also the post-mortem appearances. He mentioned that in some cases the bowels showed more indications of disease than the lungs, while in other cases the reverse was apparent, and frequently both the lungs and bowels were implicated.

Mr. Gibb, V.S., of Stratford, Ont., read an excellent paper on the value of action and position as indications of lameness in the horse, and the diagnosis of its location.

Interesting discussions took place at the close of each, in which many members participated, and a hearty vote of thanks was tendered to each of the gentlemen mentioned for his valuable contribution.

A discussion then came up, in which many took part, on the need for better legal protection to the profession, and the best

mode to be adopted for endeavoring to secure it, and it was strongly urged that all members of the profession should act in unison, as only by that means can it be hoped to attain the object in view. Several other matters of interest were brought forward and discussed. The sum of \$25 was appropriated for a medal to be competed for by the students of the Ontario Veterinary College at the approaching spring examination, and the meeting adjourned.

C. H. SWEETAPPLE, *Secretary*.

KEYSTONE VETERINARY MEDICAL ASSOCIATION.

The December meeting of this association was held on the 8th, with the following members of the profession present: Drs. Allen, H. P. Eves, Chas. T. Goentner, J. R. Hart, W. H. Hoskins, W. S. Kooker, J. T. McAnulty, Leonard Pearson, W. L. Rhoads, and a few students.

A report of the Committee on Certificates was made, the certificates were issued to those present, and the committee, having completed its task, was discharged.

Under unfinished business, the election of Dr. E. A. A. Grange as an honorary member was in order, and it was unanimous.

The following amendment to Article II, Section 3, of the By Laws was offered by Drs. Leonard Pearson and W. H. Hoskins: "Candidates for honorary membership must be proposed in writing by two active members of the Association, and their names referred to the Board of Trustees and acted upon at a following meeting."

The applications of Dr. Thomas B. Rayner and Dr. B. A. Christmann, both of Chestnut Hill, having been favorably reported by the Board of Trustees, were acted upon by the Association, and they were unanimously elected to active membership.

Dr. Ravenal, of the State Bacteriological Laboratory now gave an interesting talk on "Bacteriology in its Relation to Veterinary Science," during which he spoke of the great interest taken in science by a great number of veterinarians, the works of some having been epoch markers, the field of preventive medicine having so far proven more productive to the veterinarian than to his brothers in the healing art. Based on bacteriology we have quarantine, etc.; preventive inoculations (he spoke of the three distinct types of vaccinations). He then spoke of the best way for the general practitioner to assist the specialist in bacteriology in his work for their mutual benefit.

He said the theory of burying anthrax animals seven or eight feet deep to prevent further infection, while practically safe, was not literally so, as experiments have shown that the changes due to decomposition develop heat enough to allow the formation of spores which might be brought to the surface by earthworms. He spoke of osteo-porosis and meningitis as being of peculiar interest alike to the practitioner and the scientist.

Dr. Hoskins asked by what means we might verify the diagnosis of what we know as dumb rabies.

Dr. Goentner, having seen a number of these cases, thought a majority of them were a form of meningitis.

Dr. Ravenal now explained how the diagnosis might be proven by successive inoculations, the germ constantly becoming more virulent.

Dr. Pearson spoke of a culture being propagated through eight generations of rabbits.

Dr. Hoskins now spoke of a committee from the Milkmen's Association having waited upon him and asking that they be granted a hearing on the milk question, as they felt Dr. Morris had been heard in opposition to them. It was then moved and decided to invite Mr. George Abbott to give a half hour talk at the January meeting on the milk question.

W. L. RHOADS, *Secretary*.

MAINE VETERINARY MEDICAL ASSOCIATION.

The semi-annual meeting was called to order by President Russell, and there were present Drs. Choate, Russell, West, Lord, Salley, Joly, Murch, Cleaves and Dwinell.

Reports of the Secretary and Treasurer were read and approved.

Dr. L. Sherman Cleaves, of Bar Harbor, was elected to membership.

The following officers were elected for the ensuing year: President, Dr. F. L. Russell; Vice-President, Dr. A. L. Murch; Secretary, Dr. W. L. West; Treasurer, Dr. A. Joly.

President Russell appointed the following Executive Committee: Dr. Huntington, Portland; Dr. Murch, Bangor; and Dr. Salley, Skowhegan.

Dr. West moved that the association give a certificate of health to owners of herds tested and found healthy. After a very spirited discussion by Drs. Russell, Lord, Murch, Salley, Joly, Cleaves and West the motion was withdrawn.

It was voted to send five dollars to the committee of the Pasteur Memorial Fund.

Dr. Joly moved that the association ask the legislature to amend the public law of 1887 for the Cattle Commission to consist of five instead of three members as at present. After a very free discussion the motion was lost.

On motion of Dr. Joly, a committee of three were appointed to confer with the State Boards of Agriculture and Health in regard to the State Board of Health taking charge of contagious diseases. Dr. Russell appointed the following Committee to confer with the State Boards: Drs. West, Joly and Lord.

Dr. Choate moved that the sentiments of the association in regard to the Army Veterinary Bill be sent to Speaker Reed, the motion was carried, and the Secretary instructed to attend to the matter.

On motion it was voted to reconsider the action of the association in regard to presenting the same bill to the legislature as in 1894.

On motion it was voted that the association pay the expenses of the committee which meets the State Boards.

It was voted to submit to the Maine legislature the same bill to be introduced into the Colorado legislature.

On motion it was voted that a committee of three be appointed to look after the interests of the bill and see that it is properly presented to the legislature. Committee on legislature: Dr. Choate, Dr. Salley and Dr. Joly.

On motion it was voted that a notice of amendment to the By-Laws of the association, Art. 3, Section 1, be amended to read: "The meetings of this association shall be held once in three months."

It was voted to issue a call for a special meeting at the Hotel North Augusta, Feb. 15, 1897, for the purpose of taking action in regard to testing cattle and the board of health act.

The meeting then adjourned. W. L. WEST, *Secretary*.

VIRGINIA STATE VETERINARY MEDICAL ASSOCIATION.

The semi-annual meeting of the Virginia State Veterinary Medical Association was called to order by the President, Dr. Geo. C. Faville, in the Odd-Fellows' Hall, Staunton, Va., on Tuesday, January 5th, 1897, at 11.45 A. M.

The roll-call showed a very good attendance. The minutes of previous meeting were read and approved. After the report of various committees and the Board of Censors had been re-

ceived and acted upon, Dr. Burkholder read a very able and interesting paper on "The Examination of Horses for Soundness,"* which was fully discussed by the author and Drs. Harbaugh, Faville, Roop and Niles.

Drs. Faville and Niles reported cases of apthous fever, which elicited a warm discussion.

Dr. Faville also reported two cases of tetanus, in which the anti-toxin treatment was successful.

The President, Dr. Faville, addressed the association, remarking, in part, that the standing of the profession is advancing, and that the people appreciate veterinary medicine now more than they formerly did.

The association is in a flourishing condition, and has accomplished more than any other similar body, although it is one of the youngest. The State Examining Board, the office of State Veterinarian, act of legislature relative to contagious diseases, are all the work of the association. The President also remarked that the State Board of Health should have a veterinarian as an active member, as also should the local boards. Various cities in the State have taken up the subject of tuberculosis, and will doubtless take action in the matter in the near future.

After a vote of thanks to Dr. Burkholder, the resident member, for courtesies shown, the association adjourned to meet in Richmond on Wednesday, June 23, 1897.

THOMAS M. SWEENEY, *Secretary*.

INDIANA ASSOCIATION OF VETERINARY GRADUATES.

The seventeenth semi-annual meeting of this association, held at the State House, Indianapolis, Ind., Jan. 6th, was called to order by the President, F. A. Bolser, with the following members and visitors present: Drs. H. J. Kannal, F. L. Armstrong, O. L. Boor, J. W. Watson, J. D. Sturm, F. W. Myers, A. D. Matthews, J. O. Greeson, F. W. Anderman, G. H. Roberts, J. S. Culvert, C. F. Bell, J. Crail, J. W. Klotz, A. W. Bitting, G. G. Ferling, R. J. Hall and J. C. Rodger. Visitors: Drs. L. A. Greiner, J. F. Roe, J. R. Mitchell, Dan Sayre, J. M. Pattison, John Elliott, J. W. Coppes, E. H. Pritchard, P. O. O'Rear, W. A. Dryden, C. H. Ergenbright and J. Cramer.

The minutes of the previous meeting were read and approved.

* Will be published in an early issue.

The reports of the Secretary and Treasurer were then read and approved.

On motion the Indiana Association of Veterinary Graduates adjourned, and is now considered an organization of the past.

On motion Dr. F. A. Bolser was elected President for the ensuing year, O. L. Boor, Treasurer, and J. C. Rodger, Secretary.

On motion the chair was empowered to appoint six members to revise the by-laws of the old association. The chair named Drs. O. L. Boor, G. G. Ferling, L. A. Greiner, J. Culvert, J. F. Roe and J. R. Mitchell. It was read by sections and the changes adopted.

Then followed the enrolment of charter members of the Indiana State Veterinary Association, all present becoming members.

On motion a committee was appointed to obtain a charter.

Dr. A. W. Bitting, of Purdue University, then read a paper, a *résumé* of veterinary progress in 1896, which was well received, and a good discussion followed.

The meeting then adjourned to meet in Indianapolis in July.

J. C. RODGER, *Secretary*.

MISSOURI VALLEY VETERINARY ASSOCIATION.

The eleventh regular meeting of this association was held in Kansas City, Mo., Wednesday, Dec. 9, 1896, in Room 23, Masonic Building. The meeting was called to order at 7.30 P. M. by President Stewart, and the following members responded to roll-call: Drs. Sihler, Barth, Stewart, Harrison, Black, Moore, Kaupp, Day, Hopkins, Bray and Hunter. Visitors: Drs. Shafter, Allen, Patten, Millness, and Ovens, and Messrs. Freeman, Cooper, Conrad, Leper, Moore, Pouppirt, Wright, Simpson and Cowden.

The minutes of the last meeting were read and approved.

A communication from Dr. N. S. Mayo, was read relating to "Cerebritis" in horses, caused by eating mouldy or wormy corn.

Dr. Shafter was elected to membership.

In reference to the charges against Dr. J. H. Wattles for unprofessional conduct, being a violation of Article VI., Chapter V. of the Code of Ethics, the committee making reports thereon, upon motion, duly seconded, Dr. J. H. Wattles was expelled from the association.

Excellent papers were read by Drs. C. J. Sihler and Benj. Kaupp, and were fully and freely discussed.

President Stewart interested the members in the parasite commonly called "flake" by a short talk; illustrating the subject with drawings, and preserved specimens. After a most profitable time, well spent, the meeting adjourned to meet in Kansas City, Mo., in February, 1897.

Essayists for next meeting: Drs. Barth, Shafter and Harrison.

S. L. HUNTER,
Secretary.

WISCONSIN SOCIETY OF VETERINARY GRADUATES.

The annual meeting of this society will be held at the City Hall, Madison, Wis., on Friday, Feb. 5th, at 1.30 P.M. Secretary Dr. W. G. Clark has favored the REVIEW with the very interesting programme, which is as follows: "Laminitis," Dr. B. L. Clark, Monticello; "Tuberculosis," Dr. J. J. Oberst, Cedarburg; "Reflex Irritation," Dr. H. A. Arpke, Sheboygan. Reports of Cases—Drs. E. H. Newton, Waupun; J. F. Roub, Monroe; J. P. Laws, Madison; and D. Roberts, Waukesha. As the meeting of the State Agricultural Society occurs at the same time and place, excursion rates can be had on all railroads.

THE CHICAGO VETERINARY SOCIETY

held a banquet at the Sherman House, Chicago, on Thursday evening, January 14, 1897. Thirty-two veterinarians of Chicago responded to the invitation, and the meeting proved a success in every sense of the word. Dr. L. A. Merileat read the second part of his paper on "Veterinary Dentistry," which was followed by a lively and highly interesting discussion. There is a spirit of amiability and mutual respect noticeable in this young society which is very pleasing, and which must by necessity stimulate a higher conception of professional ethics in the rising generation of Chicago's veterinarians.

IOWA STATE VETERINARY MEDICAL ASSOCIATION.

The recent meeting of the above association was one of the most interesting ever held by it, and the REVIEW will publish the proceedings in the March issue. The following officers were elected for 1897: President, Dr. G. A. Johnson, Sioux City; First Vice-President, Dr. S. H. Kingery, Creston; Second Vice-President, Dr. J. H. McLeod, Charles City; Secretary, Dr. J. E. Brown, Oskaloosa.

CORRESPONDENCE.

PROF. LAW'S INAUGURAL ADDRESS.

WASHINGTON, D. C., Jan. 5, 1897.

To the Veterinary Fraternity:

I was much surprised at reading the address of Professor James Law, of New York, before the New York State Veterinary College.

His address was filled mainly by depreciation of all our fostered institutions of learning, especially those that aim to teach the science and art of veterinary medicine and surgery.

It is evident from his vocabulary that he is either one of two things, perhaps both, to-wit: a pessimist or an ignoramus. He claims that more than one veterinary college in America has sunk to the lowest depth of sordidness. Why don't he state the names of such colleges? but, no, he has cowardly entrenched himself against an attack behind the terms of generality.

If I am informed correctly, Professor Law graduated from an English institution, of which he has warned the American fraternity. If this be true, there is a lack of an alma-mater feeling and respect that throbs in the breast of every honest graduate. Strange, too, that he should rise from what was a short time since embryonic development to such mature and herculean proportions. Was this growth the result of English education, and was this article of his an auto-inspiration? He claims that the colleges of our country—I say the colleges because he has failed to designate the specific ones—have been guilty of the following practices: (1) To shorten the curriculum, (2) To admit ill-prepared candidates, (3) To graduate large numbers irrespective of fitness, (4) To sell diplomas. This, I say is false, as every informed veterinarian will aver.

Every college in the Association of Veterinary Faculties has increased its requirements for admission, and lengthened its curriculum, and guarded its diplomas with conscientious zeal.

Another accusation which deserves condemnation is, that the veterinary schools of America, as well as of England, are private ventures, and as such prostitute the higher motives that stimulate scientific and conscientious teaching. If the Professor will cast his august eye over the names of the large institutions of learning in this country, he will be compelled to admit that the largest and most successful are those that have depended entirely upon the results of their own work for their mainte-

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nance (such as Johns Hopkins, Standiford, Georgetown, and McGill Universities).

When you enshrine State control and franchise around an institution, you bring it within the category of political influence, and it adds an additional factor by which the politician may further influence his own personal aims.

The veterinary profession at large, also, should suppress by their united efforts an alarmist who raves without any facts, as a basis for his statements.

It may be evident to some, perhaps all, that he desires to form a trust upon the whole professional future of veterinary surgery, and he has taken this method of apparent respectability to limit the admissions to its rank. As a result of his effort and the reform work he has undertaken, we fear we will lose him prematurely as a consequence of general paresis, the premonitory symptoms of exaggerated ideas having already appeared.

The address of Professor Law, I think, demands the strongest and most emphatic denunciation of every veterinary college in America.

CHAS. M. EMMONS, M.D., PH.D.,

Professor Mental Diseases Howard University, Professor Physiology and Histology United States College of Veterinary Surgeons.

BIBLIOGRAPHY.

TEXT-BOOK OF VETERINARY MEDICINE. By James Law, F. R. C. V. S., Director of the New York State Veterinary College, Ithaca. Vol. I.

This is the first part of a text-book which, to use the words of the author, he is preparing for the use of his students. Vol. II. is now in preparation, and will in turn be followed by others, until the field has been fairly covered. In his preface, after making allusions to the well-deserved success of the *Farmer's Veterinary Adviser*, the author says that he aimed to produce a work which will meet the needs of the American student and practitioner, and with this object in view, the "Text-Book of Veterinary Medicine" is presented. After a few pages on general pathology, the subject of the diseases of the respiratory apparatus occupies the principal portion of the book, which is completed by those of circulation. The work is published by the author, and is well bound and of neat appearance.

PROCEEDINGS OF THE UNITED STATES VETERINARY MEDICAL ASSOCIATION. Session of 1896. Edited by the Publication Committee, W. L. Williams, V. S., Chairman.

We have received the above-named volume and tender our compliments to the Committee on Publication of the associa-

tion and to the Chairman, who, we are sure, has developed on this occasion his usual energy in fulfilling his duties towards the association. The book contains many important points of information relating to the association, besides the transactions of the meeting in Buffalo, with all the papers and communications presented to the convention.

INSECTS AFFECTING DOMESTIC ANIMALS. An account of the species of importance in North America, with mention of related forms occurring on other animals. By Herbert Osborn, Professor of Zoology and Entomology, Iowa Agricultural College, Ames, Ia. (Bulletin No. 5, new series, Division of Entomology), lately published by the Department of Agriculture, discusses "particularly those insects which, by direct attack upon domesticated animals, render themselves an injurious element to stock-breeder, poultry-raiser, and keeper of various animals for pleasure and profit."

Each species is treated quite fully, its past history, extent of injury, habits, and life history being given, and finally methods of preventing or relieving its injuries are described. Edition limited to 1000, and can be had from the Superintendent of Documents, Union Building, Washington, D. C., for 20 cents.

PAMPHLETS RECEIVED.

Charbon or Anthrax, Bulletin of the Louisiana State Experiment Station.

Veterinary Sanitary Board of Colorado, Biennial Report, including that of the State Veterinary Surgeon, Dr. Chas. Gresswell.

BOOKS RECEIVED.

Report of Commissioner of Education, 1894, 1895. Vol. I.

OBITUARY.

OREN H. FLAGG.

This well-known veterinary surgeon, died at his residence, 299 Acushnet Ave., New Bedford, Mass., on Sunday, Jan. 3, after a two months' illness of kidney and heart troubles. He was born in Barre, Mass., on Feb. 28, 1823, and began the study of medicine when 30 years of age, graduating as an M. D., from the Cincinnati Medical School; but, having a natural taste for animals, he turned his attention to veterinary medicine, studied with the late Dr. George H. Dadd, and in 1859 received a degree from the Boston School of Veterinary Medicine and Surgery after four years of study. Beginning practice immediately after receiving the degree in New Bedford, he has continued to practice there without interruption ever since. He enjoyed the

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confidence and respect of the community in which he lived, and was widely known and highly esteemed by the older members of the veterinary profession at large, he having been one of the originators of the United States Veterinary Medical Association.

JOSE MARIA PERALTA, M.D., D.V.S.

With sincerest regret we learn of the unfortunate termination of the promising career of this brilliant young man, who was killed by the Spanish troops in Cuba a few weeks ago. He was a graduate of the American Veterinary College, class of '92, and of the Jefferson Medical College of Philadelphia, and had gone to Cuba from his home in Costa Rica, Central America, to assist the patriots in their struggle for freedom. As a student he was most intelligent and devoted to his studies, and, although embarrassed by an imperfect knowledge of the language, he had a fine comprehension of the science. He afterwards became connected with a hospital in Pennsylvania, and finally returned to his native country with a splendid education in human and comparative medicine.

At a regular meeting of the American Veterinary College Medical Society, the following resolutions were adopted:

WHEREAS, In view of the loss we have sustained by the decease of our friend and fellow-student, A. J. P. OORT, and of the still heavier loss sustained by those who were nearest and dearest to him,

Resolved, That it is but a just tribute to the memory of the departed to say that in regretting his removal from our midst, we mourn for one who was, in every way, worthy of our respect and regard;

Resolved, That we sincerely condole with the family of the deceased on the dispensation with which it has pleased Divine Providence to afflict them, and commend them for consolation to Him who orders all things for the best, and whose chastisements are meant in mercy.

Resolved, That this heartfelt testimonial of our sympathy and sorrow be spread upon the minutes of this society and that a copy be printed in the AMERICAN VETERINARY REVIEW and forwarded to the parents of our departed friend by the Secretary of our Association. C. E. CLAYTON, D.V.S., *President*; GEO. BLACKMAN, *Vice-President*; JOHN F. FAUSNER, *Sec'y*; HORACE BOYD, BERNARD GUNTHER, *Committee*.

COMMITTEES OF THE N. Y. C. V. M. A.—The following committees have been appointed by President Huidekoper, of the Veterinary Medical Association of New York County, for the ensuing year: Board of Censors—Drs. H. D. Gill (chairman), J. E. Ryder, H. D. Hanson, J. S. Cattanaeh, and Roscoe R. Bell. Judiciary Committee—Drs. Arthur O'Shea (chairman), H. D. Hanson, and W. H. Jackson. Publication Committee—Drs. H. D. Gill (chairman), J. E. Ryder, and T. Delaney.

NEWS AND ITEMS.

DRS. HUIDEKOPER AND GILL opened the New York Canine Infirmary on January 1, says the *Journal of Comparative Medicine*.

PROFESSORS H. D. GILL, H. D. Hanson and J. E. Ryder have been appointed the editing committee of the "Veterinary Blue Book of New York."

HUGH F. DORIS, D. V. S., graduate of the American Veterinary College, class of '85, is at present a law student at the University of West Virginia.

VETERINARIANS of New York and adjacent counties will do well to join the Veterinary Medical Association of New York County and thereby derive the benefits of the association.

DR. P. A. DILLAHUNT, of Springfield, Ohio, graduate of the Ontario Veterinary College, '93, was married Tuesday, December 15, 1896, to Miss Elva Kobelanz, of Springfield, Ohio.

DR. TAIT BUTLER is no longer connected with the Mississippi Agricultural College. He is succeeded by Dr. J. C. Robert, V. M. D., as professor of veterinary science.—(*Breeders' Gazette*.)

W. H. ARROWSMITH, D.V.S., of Jersey City, N. J., opened a new hospital for horses and dogs January 9th, corner of the Boulevard and Communipaw Ave. R. M. A. English is house surgeon.

IF YOU KNOW anyone practicing illegally in New York State send their name and address to the Judiciary Committee to aid them in their work and thus benefit yourselves as practitioners.

"THE VETERINARY BLUE BOOK OF NEW YORK," edited by the committee, ought to be in every veterinarian's library, and they ought to try to assist the said committee to make the book a success.

THE LAW OF NEW YORK STATE, prosecuting persons practicing any part of veterinary medicine and surgery illegally, has been tested and found to be iron-clad. Who will be the next to be prosecuted?

DR. AND MRS. WM. H. PENDRY, of Brooklyn, celebrated the twenty-fifth anniversary of their wedding at Wilson's Assembly Rooms, in that city, on the 29th ult., and a large circle of friends were present.

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THE KEYSTONE VETERINARY MEDICAL ASSOCIATION has endorsed the bill to require the registration of master and journeymen horse-shoers, and the bill will be introduced at the next session of the Pennsylvania legislature.

FINLAY DUN, F. R. C. V. S., author of the well-known textbook on veterinary materia medica, has been appointed an examiner on veterinary hygiene in the Edinburgh University for four years, succeeding Prof. W. O. Williams, whose term has expired.

"CHARBON OR ANTHRAX" is the subject of Bulletin No. 44, being the experiences with recent outbreaks of the disease in North Louisiana by S. B. Staples, D.V.S., and W. H. Dalrymple, M.R.C.V.S., and issued by the Louisiana State Experiment Stations.

THE AMERICAN HORSE EXCHANGE, New York City, recently rebuilt on the site of the original building, which was burned last year, was opened for business on Jan. 15. It has 350 stalls and boxes and seating capacity for 1200 persons, and special sales will be held of horses, cattle and dogs.

HOG CHOLERA IN MISSOURI.—The *Breeders' Gazette* says: "An epidemic of cholera, extending over a whole scope of territory in Western Illinois and Northwestern Missouri, is carrying off hogs by hundreds and thousands. Many farmers have lost entire droves. This information comes from Warsaw, Hancock County."

THE HATCH EXPERIMENT STATION of the Massachusetts Agricultural College at Amherst, has reprinted for general distribution the excellent article by Prof. Bang, of Copenhagen, entitled "The Application of Tuberculin in the Suppression of Bovine Tuberculosis," from the *Deutsche Zeitschrift für Thier Medicin*.

PROF. EDWIN WILLETS, A. M., LL. D., whose death was announced in the January REVIEW, was stated to have been the lecturer on medical jurisprudence at the United States College of Veterinary Surgeons, Washington, D. C. We have been apprised of our error in this statement, and informed that the deceased had occupied that chair in the National Veterinary College, recently merged into the Columbian University. Although not a veterinarian, the deceased was a devoted friend to the profession.

VETERINARIANS BECOMING M. DS.—On account of the great depression in the equine industry, especially in the Western

States, many veterinarians have become discouraged and not a few are seeking to perfect themselves for human physicians. At the Keokuk Medical College, in Iowa, alone there are three former practitioners who expect to graduate in the class of '98. They are Dr. D. C. Thomas, late of Iowa Falls, Iowa; Dr. R. C. Blackburn, late of Hinckley, Ill.; and Dr. Robert Robb, late of Terre Haute, Ind.

"THE INFLUENCE OF ANIMAL EXPERIMENTATION UPON AGRICULTURE" is the title of a pamphlet which is reprinted from the proceedings of the seventeenth meeting of the Society for the Promotion of Agricultural Science, held at Buffalo, N. Y., in August last, and the author is Veranus A. Moore, of the New York State Veterinary College, a gentleman well-known to the veterinary profession through his former connection with the Bureau of Animal Industry. We hope to be able to reprint the paper in the REVIEW shortly.

THE CANADIAN-UNITED STATES QUARANTINE LAWS.—Sydney Fisher, of Ottawa, and Secretary Morton, after a full conference over the present cattle quarantine laws between the United States and Canada, have reached a general basis of agreement. The proper officers of each country will endeavor to frame mutually satisfactory regulations whereby the present long detention of cattle to be shipped from either country to the other will be avoided as far as consistent with safety. The regulations then will be presented to the respective heads of the United States and Canadian Departments of Agriculture for ratification.

A VETERINARIAN WITH PARESIS.—We much regret to hear of the unfortunate illness of Dr. Robert Summers, of Flushing, L. I., who was removed to an asylum on January 8th, suffering from paresis. He was one of the earliest practitioners of veterinary medicine on Long Island, having practiced in Flushing and vicinity for twenty-five years. He was born in Berne, Switzerland, in 1848, and graduated from the University of Berne in 1869. Dr. Summers was a man of genial personality and stern integrity, and his unfortunate malady, brought on by overwork, is a cause of much regret to his many friends. He has a wife and three children.

ILLINOIS STATE VETERINARY COLLEGE.—At the late meeting of the Illinois State Horticultural Society held at Springfield the question of veterinary science was taken up and after discussion the subject was referred to a committee consisting of

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Hon. John M. Pearson, Henry M. Miller, and H. J. Thurston, who reported as follows: "WHEREAS, We, as members of the Illinois State Horticultural Society, recognize the importance of veterinary instruction and of the immense live-stock interests of the State with which we are connected; therefore, *Resolved*, That we heartily indorse a plan to create a college of veterinary science, to be under the control of the Trustees of the University of Illinois."

THE AUTO-MOTOR CAR IN ENGLAND.—In the course of an editorial retrospect of scientific advancements during 1896 affecting veterinary interests or collateral sciences, the January *Veterinary Journal* (Principal Williams, editor) says: "The removal of the restrictions on auto-motor cars is an event worthy of note, as a possibility has thereby been created that the employment of horses for draught purposes may be dispensed with. That auto-motor cars will displace the horse to some extent in the street-transport of the parcels and heavy goods of commerce is, in my opinion, highly probable; but I also feel confident that other openings for the use of the noble animal will, with equal probability, be found."

ONTARIO VETERINARY COLLEGE.—The Christmas examinations of this college were concluded Dec. 22, and the following gentlemen passed and received their diplomas: F. G. Atwood, Minortown, Conn.; A. McKay Brock, Ottawa, Ont.; Eugene Elwood Burdick, Ashaway, R. I.; A. Edwin Dennis, Kinsale, Ont.; John P. Fitzgerald, Mount St. Louis, Ont.; Joseph Gregg, Little Britain, Ont.; Henry F. Hartnett, Brooklyn, N. Y.; Jeremiah J. Keleher, Pembroke, N. Y.; George H. Leslie, Ottawa, Ont.; David F. Luckey, Perryville, Mo.; A. R. Metcalfe, Van-
kleek Hill, Ont.; G. H. Munro, Carlisle, Ont.; Joseph Nelson, Bath, Ont.; Walter H. Orme, London, Ont.; James E. Smith, Webster, N. Y.; Joseph Telfer, Milton, Ont.; G. A. Wehr, Andreas, Pa.

VETERINARIAN KILLS A THIEF.—Dr. A. C. Worms, of Chicago, a young and successful practitioner, has had the misfortune to kill a man who stole the blanket from his horse, while the doctor was attending a sick horse in a rear stable. It was ten o'clock at night, and when the doctor discovered the fact and saw the thief running off he fired a shot after him merely to frighten him. The man was about 150 feet away, but the bullet struck him and he dropped dead. The doctor gave himself up to the police and is now out on \$5000 bail awaiting

trial. The Chicago Veterinary Society at its meeting on Dec. 10th passed a unanimous resolution sympathizing with the doctor and exonerating him from all blame, as his previous character is faultless and as his unassuming and amiable manners had long since won for him popularity among his colleagues.

A MAINE FREAK.—The most wonderful freak of nature which has lately been reported was shown a representative of the *Journal* this morning by Veterinary Surgeon Edward I. Brackett, of this city. A few days ago Dr. Brackett was called to the farm of J. S. Sanborn to remove a bone tumor from the head of a valuable horse owned by a Providence, R. I., gentleman. When the tumor was removed a piece of perfectly white bone was found which was an exact imitation of the head of a dog. The outline of the face, the eyes and the ears are very distinct, and, in the rest of the tumor removed, the entire outline of the animal is traceable. Mr. Sanborn considers it one of the most remarkable things he ever saw, and it has much interested all who have seen it. The curiosity can be seen at the office of Brackett & Zeigler on Chapel Street. The writer is free to say that if he had not seen this phenomenon it would have required some faith for him to have believed the story.—*Lewiston (Me.) Even. Journal*.

RINDERPEST IN SOUTH AFRICA.—Professor Koch, accompanied by an assistant bacteriologist, Dr. Kohlstock, has gone to the Cape of Good Hope for the purpose of discovering the cause and suggesting a method of suppressing the rinderpest. Hitherto neither preventive nor curative methods has proven of any value. While it is conceded that the disease is of microbic origin, the particular coccus has not been determined. Many investigators have discovered organisms which they claim to be the cause, and it is to be hoped that the distinguished German bacteriologist may find an antitoxin. Mr. Frank R. Thompson, late special rinderpest commissioner, states that the conditions in South Africa are most alarming; that the disease will not disappear until it reaches the dock gates at Capetown; that not one per cent. of the cattle in Cape Colony can be saved, and that there is grave danger of war with the natives in consequence of the hardships necessarily inflicted by the quarantine regulations, and the great destruction of infected herds.

A LONG CANINE FAST.—Mr. J. Mathews, Veterinary Surgeon, Bangor, has furnished the *Veterinary Journal* (England)

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with the following account of the long fast of a dog, in the shape of a letter from the owner, which is as follows; "TAIR-MEIBON, BANGOR, N. W., Nov. 3, 1896.—Dear Mr. Mathews: My collie bitch, Beauty, was buried under straw (accidentally and unnoticed, and protected by projecting timber from wall of barn) and without food or drink from Dec. 6th, 1892, to Jan. 13th, 1893, viz., 38 days. She was very fat when lost, and was nothing but skin and bone, and, of course, as nearly dead as possible when discovered. She had been 'lined' about a fortnight before burial, and I think it possible she may have pupped during incarceration, and ate the litter, if any. There was very little excretion where she was found, and that hard and dry. Her eyes and nostrils were perfectly closed with matter. I fed her at first with a little warm milk by means of a spoon inserted in her mouth. This would be about mid-day on Jan. 13th, and by the evening she was able to stand (with a little assistance) and lick the warm milk on her own account. The excretion emitted for a few days afterwards was most offensive. In about a fortnight after discovery she was as fat as ever, and is now alive and well. I remain, yours very faithfully, H. ELLIS."

MEAT INSPECTION BY THE GOVERNMENT.—Secretary Morton's report to Congress upon this subject is very interesting. The inspection of animals intended for food is treated of at length, and stress is laid upon the increased efficiency of the work, due to the extension of civil service rules, which has been very rapid in this service. The total number of ante-mortem inspections of cattle, sheep, calves and hogs during the year was 35,947,479, an increase over the previous year of over 40 per cent. The total number of post-mortem inspections was 23,164,868, an increase of 25 per cent. The total number of abattoirs under inspection in 1896 was 101 in twenty-six cities; in 1892 there were but twenty-eight in twelve cities. For the sake of economy the exports of microscopically inspected pork to countries not exacting such inspection have been greatly discouraged. The total amount thus inspected was, in round numbers, 230,000,000 pounds, of which 21,500,000 pounds went to countries requiring inspection. Clearances were issued to 819 vessels carrying cattle and sheep. Of cattle there were tagged for export 377,639, and 422,603 inspected sheep were exported. The percentage of loss in transit was considerably less than ever before. Mr. Morton urges strongly that government inspection should be extended to all animals intended for

human food whether for consumption in the United States or abroad.

BLOOD SPECIMENS OF PERNICIOUS ANÆMIA.—L. found in more than 20 cases of pernicious anæmia, outside of the ordinary nucleated red corpuscles, megalo and normoblasts, also red blood corpuscles with small bluish colored nucleoli either very small or larger and aggravated. These nucleoli are seldom so numerous as to be visible without special search being made for them. Only once has L. seen this picture on a single case of leucæmia, never in the severest cases of secondary anæmia except in one instance of hæmophilia, in which, however, it was not shown that the secondary anæmia changed into the pernicious form. These nuclei can only be seen by the methyl-blue-rosin stain, never in fresh specimens of blood. A. says these blueish nuclei are the result of disintegration of the ordinary nuclei.—(*Berl. Thierärzt. Woch.*)

THE CATTLE COMMISSIONERS OF MAINE.—A meeting of the Maine Cattle Commissioners (Hon. F. O. Beal, of Bangor, Hon. John M. Deering, of Saco, and Dr. George H. Bailey, of Deering) was held in the Bangor House on Wednesday night, Dec. 30, to close the business of the year and discuss the situation of affairs. The commissioners have made arrangements whereby any one in the milk business who desires his herd tested, in order to secure an official certificate of health, may do so by notifying the commissioners and by complying with the rules and regulations, which are that the cattle be properly tested, the owner paying the expense of the test, \$1 a head. The State takes charge of all diseased cattle, certificates being granted only to a healthy herd. Every consumer of milk should demand that the person who supplies it shall have a health certificate. On Tuesday Commissioner Beal caused 15 cows in a herd of 19, belonging to C. H. Patterson, of Hampden Centre, to be killed. A diseased cow had been previously found in Mr. Patterson's herd, and it was at his request that a thorough examination of all the cattle was made. Three cows in a herd of eight in Bangor were also killed. Other cases are suspected to exist and will soon be investigated. In Westbrook between 40 and 50 thoroughbred cattle owned by Alonzo Libby will be destroyed later.

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